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THE WEST VIRGINIA

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The West Virginia Medical Journal

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PRESIDENT'S ADDRESS

By J. Howard Anderson, M. D.

Marytown, W. Va.

Fifty-Fourth Annual Meeting Charleston May, 1921.

Another year has passed into history and in the passing another chapter of the achievments of the West Virginia Medical Association has been written for weal or for woe.

To me this is a momentous occasion. To occupy the Presidency of the Medical Association in this physically beautiful and industrial great Little Mountain State of West Virginia, should mark an epoch in any man's life. I assure you it does in mine.

Would that I had the simplicity and the forcefulness of a Lincoln—the command of language of a Webster—the eloquence of a Clay, that I might suitably express my appreciation of the honor thus conferred upon me.

As I analyze my inmost thoughts and feelings they are truly paradoxical. I experience a strange commingling of pride and humility. Pride—because you have considered me worthy to act as President of your Organization. Humility—when I think of the many noble and great men who have occupied this chair in days past, and when I ponder upon the responsibility resting upon my shoulders as the exponent or representative of such a time honored Organization, and as I attempt to sound the key note of this magnificent Assembly in this our Capital City.

Some professions may be designated as great, because of the magnificence of their achievments. Others may be designated as good because of the righteousness of their aims and activities. Still others warrant a third appelation which, to me, embraces both magnificent achievments and righteous aims. Namely, the term Noble. And what profession is most surely an exponent of true nobility than that of the medical profession. Yes I say, it is the "Noblest Roman of them ALL."

Gentlemen, your profession is noble, because its sole aim and object is to alleviate the sufferings of humanity and to

stay the hand of man's most relentless enemy—Death.

It is noble, because it enjoys the greatest authority and power of any profession and yet uses that authority and power only on behalf of the protection and welfare of Mankind.

It is uniquely noble, because it is the only profession which by the very nature of its original research and its many sanitary recommendations and activities, tends to destroy its own chief source of livlihood—namely, disease and suffering. What other profession is so philanthropic?

Noble—I say—because down along the ages, through changing scenes and conditions, yea midst the greatest social upheavals in history, it has steadfastly refused to veer its course or change its philosophy from that of constructiveness. Witness the part it played in the recent Great War. When all professions, all world agencies, almost all peoples seemed bent on destruction, and the very foundation of civilization seemed to be tottering, the one great constructive agency was the Medical Profession; for four long, weary soul-trying years, if not the only, the greatest constructive and repairative work was accomplished by your profession; midst all this turmoil it refused to depart from its sacred tradition of helpfulness, and it steadfastly clung to its constructive philosophy.

To further substantiate its magnificent achievments—let us turn to the pages of history and note the dire consequences to great nations because of the lack of present day knowledge of the sources of disease and of the modren fundamentl principles of disease prevention.

Prof. Jones of Cambridge, England, in speaking of the part disease played in the fall of Greek Civilization, says:—

"With the introduction and spread of Malaria (about 500 B. C.) there was a marked change in Greek character. Patriotism decayed—and lofty aspirations almost ceased to stir the heart of man. In art, there appeared a tending to sentimentalism; while philosophy, in many quarters, became distinctly pessimistic."

Again Prof. Jones and Major Ross, the greatest English authority on Malaria—as a result of their delving into Roman literature, especially the writings of Livy, Plautus, Terrence, in which grave concern is expressed for the welfare of the Empire because of the devastation of epidemics of disease which seemed to invade and hold their land enthralled in their deteriorating grip—came to the conclusion that the decline of Roman Civilization was largely due to the introduction of the Malaria parasite thru the agency of Hannibal's Carthaginian Mercenaries.

Thus yesterday, the Civilization of brilliant artistic Greece and rugged law-giving Rome crumbled and decayed under the ravages of the Malarial parasite which, imported from Africa, sapped their physical prowess and dimmed their mental vigor.

While to-day—the Medical Profession, under Major General Leonard Wood has changed Havana, Cuba, from a pestilence ridden plague disseminating city to an ideal health resort—under the leadership of the late General Gorgas, made possible the building of the Panama Canal which baffled the most brilliant European Engineers—and under the direction and patronage of Rockefeller Institute, aided by the U. S. Health Service, are delivering our beloved Southland from physical and mental indolence due to the scourge of trachoma and hookworm.

In this connection, Vaughan, Ex-Pres.

of the American Medical Association, calls attention to the fact that the death rate in London (which may be considered a representative of the world) has steadily and consistently diminished from 80 per thousand in the Seventeenth Century to 14.3 per thousand in the present. He attributes this wonderful decrease to the efforts and the researches of the Medical Profession.

The discoveries of vaccination for Small-pox, Antitoxin for Diptheria; the recognition and proof of the source of infection in Typhoid Fever, Typhus Fever, Tuberculosis, Malaria, Yellow Fever and Hook Worm; and the insistence upon pure water supply and proper sanitary disposal of sewage and other forms of filth, tell the wonderful tale of this marvelous reduction in mortality. For through these discoveries the great enemy to human progress—Infectious Disease—which kills its thousands, cripples its tens of thousands and impoverishes other thousands, is held in leash or utterly wiped out.

Again—If you turn to the works of Eminent Sociologists and Economists, you find they insist that we should reckon the wealth of the nation, *not* upon the vast sums of gold piled in her treasury vaults—*Not* upon the untold natural resources concealed within the bowels of her lofty domes or craggy peaks or spread upon the broad bosom of her plains—*but* upon the number of individuals physically able to produce wealth—namely her PRODUCTIVE CITIZENSHIP.

The Kenn, Patriotic Statesmen of the Ancient Roman Empire, when in the Zenith of her greatness, realied this fact and gave utterance to it in the axiom:

"Solus populi suprema lexesto." Some may interpret this as applying only to the safety of the State as against the aggression of a foreign foe, but as you read more carefully their contemporary literature such other axioms as—

"Mens Sana in Corpore Sano" it would seem that their thought and discussion penetrated deeper than superficial Military greatness and safety and that they were grappling with the fundamental principles of true greatness.

Consequently, judging from the writings of Economists and Patriotic Statesmen, is not the Medical Profession one of the greatest National Benefactors—when by decreasing infant mortality, and by preventing blindness and the spread of those diseases, which cause mental deterioration, it conserves the ranks of the workers and minimizes Society's burdens.

Further:—Those illustrious in Literature pay their tribute to your profession, both as to your powers, privileges and your responsibility, for no less personage than Rudyard Kipling has the following to say:

"There are only two classes of mankind in the world, doctors and patients. The average patient looks upon the average doctor very much as a non-combatant looks upon troops fighting on his behalf, and thinks the more trained men that are between him and the enemy the better. DOCTORS ARE DRAFTED into that permanent army which is always in action, under fire, fighting against Death. It is unfortunate for the doctor, that Death is bound to win in the long run. We patients must console ourselves with the idea that your business is to make the best terms you can with Death on our behalf, to see that his attacks are diverted or delayed as long as may be, and to see that when he insists upon driving the attack home, that he does it according to the rules of Civilized Warfare."

"You belong to a privileged class, and some of your privileges are these:—

You and Kings are about the only people whose explanation a policeman will accept if you exceed the legal limit in a motor car.

On presentation, your visiting card will pass you through turbulent and riotous crowds unmolested.

If you fly a yellow flag over a dense center of population, it will turn into a desert.

If you fly a Red Cross flag over a desert it will turn it into a center of population. Men will crawl to it on their hands and knees, as I know.

You may forbid a ship to enter a port, and, if you think the exigencies of an operation demands it, you can stop a 20,000 ton liner, with her mails, in mid-ocean.

At your orders, houses, streets, whole quarters of a city will be pulled down or burned.

Yours remains the only class that dares tell the world that we can get no more out of a machine than we put in it, and that, if fathers have eaten forbidden fruit, the children's teeth are very likely to be affected.

Yet—your profession exacts from its followers the largest responsibility and the highest death rate of any in the world.

The world decided long ago that doctors have no working hours that anybody is bound to respect. Nothing except your extreme bodily illness will excuse you, in the world's eyes, for refusing to help mankind at any hour of the day or night. In your bed, bath or holiday—if any of the children of men have pain—you will be summoned; and what little vitality you have accumulated in leisure hours will be dragged out of you. At all times—in flood, fire, famine, plague, battle, murder and sudden death—it will be required of you that you should report for duty at once, to go out on duty at once, and to stay on duty till your strength fails you or your conscience releases you—whichever may be the longer period.

And I do not think your obligations will grow less. Nobody has ever heard of a bill to promote an eight hour day for doctors. No change of opinion will allow you not to attend a patient when you know the man never means to pay you—or protect you from people who, although perfectly able to pay, prefer to cadge round a free hospital for their glass eye or cork leg. It seems to be required of you that you must save others; no one has laid down that you need to save yourselves.

Every sane human being agrees that this long-drawn fight for time, that we call life, is one of the most important things in the world. It follows, therefore, that you who control and over-see this fighting, must be among the most important people.

Thus gentlemen—I have crudely depicted to you what the world considers the ideals of a doctor and the ideal doctors should be.

In the words of Burns:

"O wad some power the giftie gie us
To see oursel's as ithers see us!"

And that we, fully appreciating the wonderful heritage handed down to us by our predecessors, may broaden and straighten our shoulders as an Association and as individuals to receive the professional mantle as it falls upon us.

Some one has said—The history of the world is but the history of its great men. Every step in human advancement, every period of world progress is inseparably linked with the life and the achiev-

ment of some conquering General, wise Statesman, or heroic Reformer. What would the history of Carthage be without Hannibal? The Grecian conquest of Asia without Alexander the Great? The Roman subjection of Gaul, without Caesar? The Civil Wars of England without Cromwell? The French Empire, without Napoleon? The German Reformation, without Luther? The struggles of American Independence and of Equal Freedom for all, without Washington and Lincoln

Volumes have been written concerning the life work of each and every one of these men. Busts have been made, pictures have been painted, tablets have been erected, monuments have been builded, and places in the Hall of Fame have been awarded to perpetuate the memory of these great men and hold their achievments before Generations yet unborn. *And Justly so.*

But, great as the work they accomplished has been, are they greater Benefactors to the human race than *Harvey* or Hunter, who respectively discovered the circulation of the blood and pointed out its true anatomical value.

Or Jenner, who gave suffering humanity Vaccine as a panacea to the world-wide scourge of Small-pox.

Or *Pollender* and *Davaine,* who respectively discovered the germ of anthrax and proved it could be transmitted from one animal to another.

Or *Pasteur,* who, by his treatment of chicken cholera anthrax and hydrophobia unlocked the door and took the first step towards modern methods in staying the progress of contagious diseases.

Or *Lister,* who, standing upon the hill top of Pasteur's discoveries, gave Aseptic Surgery to mankind.

Or *Morton,* the dentist, who by applying the soothing balm of anaesthesia, obliterated, temporarily, the almost unbearable pain of the victim of the surgeon's knife.

Or *Koch,* who carried on the work of Pasteur and in 1882 discovered the tubercle bacillus.

Or Neisser, who found the gonococcus in 1879.

Or Eberth, who isolated the Bacillus Typhosis in 1880 and that of Diptheria in 1884.

Or Castellani and Yersin, of Sleeping Sickness and Bubonic Plague fame.

Or Reed and Loziar, who sacrificed their lives on the altar of Science, that Yellow Fever, the pest of this continent, might be stamped out.

Or many others such as O'Dwyer, McDowell, the Grosses, Pancost, DaCosta, McBurnie, Senn, Keen, and Murphy?

Is not too little known of their achievments and the beneficent results thereof? Should we as a profession not do more to perpetuate their memories? May we not insist that they have a greater niche in the Hall of Fame?

Far be it from me to detract one iota from the luster which scintillates about and rests upon the brows of these, Our World's Heroes. But as we delve deeper into the annals of history we find Nations gained and maintained their supremacy and power amongst their fellows more by the aggregate strength and superiority of their superb citizenship, than by the mere possession of a few great men. These men simply stand out as exponents of their generation, reflecting the aggregate greatness of their day and generation.

For Glory departed from Greece, with her Alexander, sighing for more worlds to conquer, when the luxury, idleness and disease of her citiens sapped her physi-

cal strength and dimmed her intellectual vision.

Rome fell, in spite of her Caesar, when her populace became corrupt, ignorant and degenerate.

The French Empire crumbled, with Napoleon—her creative genius still in his prime, when the flower of her manhood became dissapated in wanton Wars of Conquest.

Therefore, let us not sit with hands folded and gaze with wonder and admiration at these stars of the First Magnitude, but let us rather realize that the present and the future greatness of our profession depends upon how well we play our part—for we now furnish the aggregate idealism, strength and faithfulness to ideals of our profession.

Let us remember that:

"Genius is the capacity for hard work."

and as Disraeli says:

"In the enthusiasm of genius—philosophy becomes poetry, and science becomes imagination."

While in the words of Virgil:

"Labor Omnia Vincit Improbus."

Further—Let us not be so small as to become jealous of our neighbors success. If he has attained much he has labored much—for there is no excellence without great labor.

In the words of Edgar A. Guest, one of America's youngest poets:—

"Whenever you see someone at the top,
Don't imagine he got there by luck,
For back of his glory lies many a story
Of battle and struggle and pluck;
He may seem to be taking things easy to-day
And dodging the trials which irk,
But the years of the past, from the first to the last,
Were a constant succession of work.
Whenever you see someone crowned with success,
Don't fancy he won it by chance;
Though he's walking to-day on an easier way,
And you cannot behold with a glance,
The scars of his battle, just keep it in mind
Life's laurels don't go to the shirk,
And if you but knew his life's history through,
You'd know that he once had to work."

Again ever bear in mind that the terms, Reputation and Character, although often used erroneously as synonymous, really differ vastly in meaning. Reputation is what others think of you. Character is what you are. Reputation changes with the whim of the populace and is not stable or permanent. Character is changed slowly and then by your own volition. Enemies may rob you of your Reputation. *You are the sole, absolute master of your own destiny as far as your Character is concerned.* Reputation is but a mushroon growth. Character lives forever and wins in the end. Let us see to it then that we build professional character both as Individuals and as an Organization.

To-day, the Spirit of Progress, more than ever before, perches itself upon the banner of Civilization.

"The world is breaking from its iron chain,
And like a giant, struggling to be free."

Once, we travled by horse or coach, now, by motor car and areoplane. Formerly we communicated with another by post, now, by telephone and wireless.

In keeping with the universe speeding-up, the Medical Profession has turned to Specialization. Young men just stepping out from Medical College, often

with not more than a few months or a year of special training, rush into the ranks of the Specialists. Is there not grave danger in this? May the superstructure not prove top-heavy and the foundation lack in breadth and depth?

Furthermore, does this not tend towards lowering the ideals of our Great Profession, and the making it more of a cold-blooded business proposition. As a patient, did you ever sit in the office of a Specialist. Did you ever take one you loved—your wife, your child, your mother, or your father to a Specialist? Probably you have experienced this distant, cold, calculating, almost unsympathetic indescribable something creeping in to chill your heart. Do not misunderstand me as criticising all Specialists, for many of them, through years of experience, have acquired that sympathy, which seems to be engendered and enhanced in one, who has entered into the joys and sorrows, the trials and triumphs, the cares and confidences of a General Practice However, let me appeal to you all—Specialists and General Practitioners—to cultivate that attitude of consideration and sympathy towards your patients, which tradition attributes to you, and to strive to resist the tendency to look upon the sufferer, who entrusts himself into your hands as one more scientific specimen and problem.

May we not, without slighting our devotion to Science, also "Be a friend to Man" as is so nicely expressed in the following words of the poet:—

"There are hermit souls that live withdrawn
In the peace of theirself content;
There are souls, like stars that dwell apart,
In a followless firmament;
There are Pioneer souls that blaze the paths
Where highways never ran;
But let me live by the side of the road
And be a friend to Man.
Let me live in a house by the side of the road,
Where the race of men go by,
They are good, they are bad, they are weak, they are strong,
Wise foolish, so am I.
Then why should I sit in the scorner's seat,
Or hurl the cynics ban;
Let me live in a house by the side of the road
An be a friend to Man.

The late William Osler once gave the following advice to a body of physicians:

"Do not become so deeply absorbed in your profession as to exclude everything else. The more you see outside the narrow circle of your work, the better will you be equipped for the struggle."

Therefore, let us, as individuals, not be lop-sided men possessing only Medical Knowledge, but rather let us strive for broad personal vision, and as an Organization be interested in Civic and National Welfare.

Healthy Citizenship is the greatest asset our Commonwealth may possess.

The health of that citizenship depends largely upon the efficiency and integrity of our State Health Council—its financial support, and the number and quality of the medical men at its disposal.

Our State Health Council—thanks to the wise selection of our Governors past and present—has been of the highest standard.

But would it not more surely guarantee the future talent of this important organzation and guard against the possibility of appointments to said body in lieu of political favors, if the appoint-

ments were to be made by the Executives from a list nominated by the State Medical Association?

Thanks to the generosity of our Legislative body the funds appropriated for the carrying on of this work have been increased year by year. Probably, they have been in proportion to the earnestness and intelligence of the appeal made by us, but even so they are not sufficient The sum provided for this work is insignificant in comparison to that provided for other less vital purposes. Do you not think that if we clearly pointed out to our Budget Committee and our Legislators the future bearing of such matters on the ultimate economic and industrial greatness of our beloved Commonwealth these funds would be vastly increased?

Again—Healthy Citizenship is preempted by the eradication of Disease. An educated Medical Profession is absolutely essential to eradication of Disease Well equipped Medical Schools are the fountain source not only of an Educated Medical Profession but of research work. Medical Schools cannot be maintained without Finances. Finances cannot be provided without Public Interest is sustained. Who should endeavor to sustain this interest more than the Medical Profession of our State?

Knowledge is Power, but Bacon insists that "we must determine the relative value of Knowledge, some is useful, real and effective—other is unuseful, unconventional and ornamental; and that Knowledge which leads to better physical lives is Communal as well as Individual."

Herbert Spencer, in his classification of Knowledge, places in the foremost rank as most important, "that which directly or indirectly contributes itself to self preservation."

I take it that this type of Knowledge, which is so valuable, can best be obtained and must largely eminate from a First Class Medical School in our State.

The Medical School of the University of West Virginia has struggled manfully to elevate and maintain the essential standard.

She must continue to do so, if she expects to retain, within the State for the State, those thinking of entering the Medical Profession, and better, if she is to induce more of our Sons to enter our Profession. I say "induce" advisedly for did you ever stop to think that a young man can enter any other Profession two or three years earlier in life than he can the Medical Profession because of the high standard of the entrance requirements and the length of course now demanded of a First Class Medical School.

Does it not behove us as Individuals and as an Organization to agitate, at home and abroad, the establishment and the maintenance of a First Class Medical School within the borders of our State? Should not this be a matter of both Professional and Civic pride? Surely we can exert enough influence to accomplish this great thing—if we but make clear to the Public the great necessity from an economic standpoint.

Another subject which ought to be of most vital importance to this beloved Nation of ours, with reference to which it is a question whether our profession fully realizes or at least whether they assume their proper degree of responsibility, is Immigration.

What is of more vital importance to our Country than the stock of our future generations? Who should guard more jealously the purity of this stock and more loudly sound a clarion warning against its contamination and deterioration than the Medical Profession?

Some one had asserted that it takes six generations to make a typical true-blooded American. In their inception these United States were indeed fortunate in the stock or race of peoples who laid the foundations upon which the noble superstructure of our Nation is being built.

This Anglo Saxon blood—the greatest the world has produced—is, as it were, an ideal strain. It is co-mingling of the courage of the Celt, the Valor of the Viking, the Daring of the Dane, the Bravery of the Briton, the Nobility of the Norman and the wonderful physicial strength of the Saxon. Of such blood were the founders of our nation and this stock which not only predominated in, but practically comprised the generation of Americans up to the year 1850. Then the flood gates of Immigration were opened and the purity of this strain has steadily become impaired, until, at the present day, we have at least thirty milliion foreign born, to say nothing of those two or more generations removed. Is there not danger of too much base metal entering into this Melting Pot of Nations?'' Can this go on idefinitely without danger of making this a polyglot Nation, lacking marked characteristics? In a recent issue of the Saturday Post, the editor, touching on this subject states in part ''During a single human generation nearly every form of useful or ornamental life has been notably improved, many of them to such an extent that when compared with the originals they seem like exotic or even new creations.'' Then alluding to the wonderful achievements of Mr. Burbank along this line in the plant world, he continues:—''At root the greatest source of his power is his ability to choose the parents of every series of offspring that is the subject of his fostering, to employ only select strains, ruthlessly suppressing recessive or degenerate types.

In Washington we have several unschooled Burbanks—Burbanks in power, if not in knowledge or singleness of purpose—who hold in their hands, to a disquieting degree, the potential ability to select or exclude or foster those racial strains that will be the future parenthood of many millions of unborn Americans.

It is to be doubted if many of these potential Burbanks realize the stupendous responsibilities that devolve upon them when they undertake to frame immigration laws. The economic, the industrial and the politicial aspects of the subject are dinned into them every day; but the racial phase of the problem, though by all odds the most important, is the least studied, debated and considered. And yet it is not too much to declare that, for good or for evil, our Senators and Representatives are the propagators, almost the vicarious ancestors, of whole populations of future Americans, for theirs is the say as to their racial parenthood.''

Dr. Lothrop Stoddard puts the case clearly and strikingly: ''The admission of aliens should, indeed, be regarded just as solemnly as the begetting of children, for the racial effect is essentially the same. There is no more damning indictment of our lopsided, materialistic civilization than the way in which, throughout the nineteenth century, immigration was almost universially regarded, not from the racial but from the material point of view, the immigrant being viewed not as the creator of race values but as a mere vocal tool for the production of material wealth. Migration, like other national movements, is of itself a blind force. It is man's

divine privilege as well as duty, having been vouchsafed knowledge of the laws of life, to direct these blind forces, rejecting the bad and selecting the good for the evolution of higher and nobler destinies."

Congress has it easily within its power to use the wise restriction of immigration as an effective and beneficient method of world eugenics.

Prof. Edward Ross, a racial expert, depicts our possible condition at the close of this century and thus proposes a fitting epitaph for our dwindling native stock:— "Then when immigration has ceased of itself, when the dogma of the sacred right of immigration has wrought its perfect work, and when the blood of the old pioneering breed has faded out of the motley, polyglot, polychrome, cast-riven population that will crowd this continent to a Chinese density, let there be reared a commemorative monument bearing the words—

To the American Pioneer Breed
The Victim of Too Much Humanitarianism, and
Too Little Common Sense."

Should this not be a matter for the serious consideration of the Medical Profession? Is the responsibility of bringing the vital importance of this subject forcibly to the attention of our National Legislative Body not one that should be assumed by the Medical Profession? Does this responsibility not fall within the scope or field of our endeavors? What is the answer of the Medical Profession? Will you or no—raise your voices and use your influence to avert this impending calamity?

Again—A very important, if not the most important subject which should concern us, is the formulating and the possession of a definite Public Policy by our Organization pertaining to matters which vitally touch our welfare as an Association and as Practitioners.

At our Annual Meetings, in our eagerness for scientific knowledge, we devote all our time to the pursuit of our Scientific Programme, neglecting to duly deliberate upon many questions of vital importance to our Profession.

When trying to urge the passage of certain acts or attempting to oppose other legislation brought before our Legislative Body, our Legislative Committee have been taunted with the statement that our State Medical Association does not have any fixed policy behind which all our Members will stand and that therefore our Committee do not speak with authority and do not represent any politicial unit or power which the individual Legislator need respect or fear.

Is this as it should be? Other groups throughout the State wield much influence. Why not the State Medical Association?

May we not thresh out the position we deem wise with reference to such subjects as are of vital importance to our welfare? Let the Majority rule in deciding what we want and the line of action we expect to pursue in obtaining the same from one end of the State to the other. Let us back to the limit the policy and the work of our Public Policy and Legislative Committee and avoid working at cross purposes. Let us remember the old axim—"United we stand, divided we fall." And let us present an unbroken front in securing such Legislation as we deem wise and of benefit to ourselves and the Health of the State.

There are other questions, such as, "Health Insurance," "Uniform License

Laws in the United States," "Physicial Examination of Teachers in our Public Schools to Eliminate Tuberculosis," and "The Uniform Physical Examination of Pupils in our Public Schools and their Treatment," which are of no small importance to the Medical Profession and which invite our attention, but time forbids.

May we as Individuals and as an Organization, at this meeting in our beautiful Capital City, not reconsecrate ourselves to the ideals of our Noble Profession.

Let us be true to the glorious traditions of our past, and in the future, acquit ourselves like men, keep our escutcheons untarnished, our ermine unstained, and strive to add new luster and further laurels to those acquired by our worthy predecessors.

Trusting this meeting may be a most harmonious and profitable one; and that we may here gather knowledge and inspiration that will make us better practitioners during the coming year; and again, thanking you for the honor conferred upon me, I wish you God Speed.

VITAL FACTORS IN THE CONTROL OF CANCER

By Dr. FRANK LEMOYNE HUPP,
Chairman of the West Virginia Branch of the
American Society for the Control of Cancer.

Public address delivered at Charleston meeting of the West Virginia State Medical Association, May 25th, 1921

It was a gracious courtesy on the part of my friends, President Anderson Dr. Nicholson and the Committee, to invite me to deliver the public address at this gathering of the State physicians. I would be wanting in gratitude if I did not express my appreciation, not for myself alone, but for the cordial recognition of the Ohio County Medical Society, of which I am but a humble member.

The American Society for the Control of Cancer was founded in the city of New York on May 22nd, 1913, at a meeting of delegates appointed by the leading medical and surgical organizations of the United States and Canada, together with a number of prominent lay citizens, who were convinced of the need of a national society to disseminate knowledge concerning the symptoms, diagnosis, treatment and prevention of cancer, to investigate the conditions under which cancer is found, and to compile statistics in regard thereto.

In establishing an organization of this character and for this purpose, the founders gave practical expression to the hope and belief that a nation-wide campaign of public education regarding cancer would save thousands of priceless lives now needlessly sacrificed every year because of ignorance of the warning signs of this insidious disease, and delay in seeking competent medical help, advice and treatment, even after symptoms are recognized.

Many within my hearing attended the meeting of the Surgical Congress in New York, in 1919, and will remember the sledge hammer blows given this very subject by the President, Dr. W. J. Mayo.

One need not have lived very long ago to recall how dyspepsia was counted the ban of American diseases. Now we seldom hear of purely functional digestive disturbances of a serious nature.

Better food, healthier teeth, more barnyard sense on keeping the sewer-pipes of the body sanitary, has corrected this.

In the same way we have progressed out of the era, not so ancient, when typhoid occupied the chief place in our fears. We used to hear, all over our State and in our own town of Wheeling, about a thousand miles of Ohio River and a thousand miles of typhoid; innoculation, education and municipal pride have wiped this disease practically out of our hospitals. Appendicitis, once so highly mortal, has yielded to early recognition and the aseptic scalpel. New methods of diabetic treatment have largely removed a menace that formerly thwarted the efforts of the internist and abridged the lives of many, a short decade ago.

Not long ago volumes were written on the subject of race-suicide, but there came an awakening and it was found through the child welfare movements that it was not that too few children were born into the world, but that far too many were permited to die; the babies were given clean milk, the little white hearses stopped passing our doors, and so the tables changed. Even what used to be called the "great white plague" has been circumscribed in its ravagess, by education, segregation, sanitary housing, and restorative care. The secrets of venereal diseases once whispered and shunned have been yielded up, the curtain raised, the blighting hand of this black plague exposed, through sane teaching and propaganda.

It has been made evident here to-day and it is among the uplifting purposes of this Association that the next problem we have to face and solve, not alone the men of medicine, but the laymen as well, is unconquered Cancer, with its appaling annual mortality of almost 100,000 in this country, insreasing as it is at the rate of twenty-five percent every ten years. In our little State of West Virginia we had almost 600 deaths last year, and in the environment of Wheeling about 100 fell victims of this disease. In New York State there are 8,000 deaths from Cancer annually.

You men and women are to be workers in the mint,—in the words of the lamented Osler,—you are to help shape for use the pure gold wrought in the laboratories by the miners of science. You are to help educate the millions of untutored laymen. With your assistance the searchlight of publicity and education will cut in twain this high mortality. Under your directorship the condemning finger of scorn will be pointed at this demon tormentor, this unrelenting juggernaut, not only to illumine the mind and satisfy the conscience, but to point with unerring accuracy the way for those of the public who have been misled through ignorance in the past.

Repeat to them if you will what we as physicians know to be true, that cancer is not hereditary, not contagious, not infectious that it can be prevented and cured if taken early. Urge the people to avoid irritating the stomach with hot drinks and burning hot foods, tell them there are 3500 deaths from cancer of the stomach annually in this country, and that the last census shows that deaths from cancer of the stomach are in the proportion of about 20 per 1000 population. Tell the smoker of the irritating effect of the rough pipe, and that the relation of habitual smoking to cancer of the mouth and tongue is well established.

Tell the dentist that no rough tooth or indefferent dental work is to be turned

from his office uncorrected, if he would spare the tongue and mouth an almost inevitable malignancy. Let it be known that he who is insanitary about the care of the teeth may excite a sore that may lead to a cancer of the mouth.

Tell the unsuspecting mothers, and womankind in general, that the tumor of the breast is not there for any good purpose—and that after 35 is a breeder of malignancy; that irregular bleeding is a menace and should always be investigated, particularly about the change of life. The number of deaths from cancer of the female generative organs is about 13,000 annually, and from Cancer of the female breast about 8,500.

The bleeding wart, the sore birthmark. the pressure sore, from the vanity glasses, all are deserving of the closest scrutiny.

It is the purpose of our profession and of this cancer campaign to give a message of hope with all firmness and without equivocation or indecision. Certainly such straightforward teaching should never terrify. Whether this word come through the teacher, the nurse or the physician, it must be one of confidence, understanding and trust, and never to be interpreted in the light of alarm—it is purely a safety first campaign we wish to wage.

While a great deal has been accomplished, much yet remains to be done in the way of the education of the public, in the rural districts, in the hamlets, towns and cities, and it must be done wisely, temperately, and without alarming the people. It is a perfect understanding of the fact that this disease can be cured by radical treatment in its earliest stages, that must be disseminated.

As has been so emphatically written in the handbook published by the committee of the American Society, cancer is not a disease that runs its course, like pnuemonia, or typhoid; it is an actual entity, a lawless growth of cells—and as much a part of the individual as his hand or his nose, and unless radically and completely removed, it goes on its destructive course to a fatal termination. The layman knows only of the multitude of cases that have made every conceivable effort to obtain relief, and tried every known remedy from Christian Science, the charlatan's paste, and the advertized nostrum, to the skilled surgeon's scalpel, radium and the x-ray. He has seen and heard of the failures, with pity, and fortitude, and has watched a myriad of these disappointments cross the divide, victims of a merciless foe. But who has instructed them in that long procession of brilliant cases that have been discharged cured and continued cured from the modern hospitals, the high score of successes due to brilliant and skillful surgery. These facts, so little talked about, yet so well known to the physician; patients with undoubted cancer, who have subjected themselves to modern methods and who have gone five, ten and twenty years without recurrence. The evidence has multiplied and is convincing that it may be safely maintained that no other statistical conclusion in medicine is so concisely and incontrovertibly established.

Very naturally the person who suffered, and who lost an organ, or whose body bears ascar of the operation by which bears a scar of the operation by which tale of woe. It is difficult to controvert this prejudice by assertions of possibilities of cure by operation, radium or X-rays. But it must be done if the public is to understand the actual facts of this Cancer problem.

Every physician, yes, every intelligent layman, should feel it his duty to help make the facts clear, as we know them, to the less fortunate brother within our reach. The physician of the present day must do far more than care for the cases of disease that cry for help. He is the health officer of his own clientele, and they look to him for knowledge and guidance.

As Dr. Bloodgood has so well said we have much valuable information approved by our profession, on preventive medicine, on personal and public hygiene, on the importance of county, city and state public health departments. on the early sign and symptoms of disease. But we must not leave to the government, to national and state medical socities, and to the public press, the entire responsibility of conveying this information to the untutored, in the proper form. Each physician, each nurse, indeed every intelligent layman within my hearing, must tactfully teach those with whom they come in contact.

Studies of a considerable number of cases reported by different investigators would indicate that on the average people afflicted with Cancer wait almost twelve months after noticing the pre cancerous sign or lump, before they seek help. One of the objects of the Society for the Control of Cancer, indeed one of the aims of this State-wide campaign is to annihilate this factor of delay; as Presidents Powers has said, to reduce it to one day, if possible. The Society exists to teach these and similar facts about malignant disease, and to combat the pessimism which now prevails regarding treatment.

The instruction which has been given to the public is already bearing fruit, yet it is only a drop of relief in an ocean of woe. The good news comes from nearly every state that the patient with early symptoms of cancer is seeking help much earlier and because of this encouraging report it certainly behooves physicians in general to feel keenly the obligation which rests upon us, the nearest and first-sought source of scientific knowledge, and to give to these suppliants that wise counsel which they have a right to expect.

Do you ask, my friends, why these plain facts are presented to this audience? It is to impress upon you that yours is an undivided responsibility in pointing the way for that one-tenth of the people over 40 who are to yield up their lives to this public enemy.

George W. Crile, that past-master of our art, has somewhere written: "All the vast researches into the cause and cure of Cancer have thus far yielded neither an adequate explanation of its primary cause, nor a specific cure. Until a specific cure is discovered, therefore, the one and only method of prevention is the removal of the pre-cancerous condition."

"The layman, putting aside morbid fears, must report to his physician any persistent abnormal visible growth or symptom of abnormal interest; and the Internist must instruct his patient that the early and complete removal of the affected parts offers the only hope of cure, and the surgeon must "carry on" in the clinic and the laboratory researches for the more definite methods of diagnosis and more efficient therapeutic agents. The surgeon, for his part, must develop his technique so that the cancerous growth may be completely removed, with the least possible trauma, and must discover further means by which to conserve and increase the vital forces of

his patient. As the cancer problem stands to-day, the disease is to be conquered only by the closest 'team-play' of these three—the layman, the internist and the surgeon.''

CONTINUAL IRRITATION AS A FACTOR IN THE CAUSE OF CANCER

It is a well established fact, as we have mentioned, that cancer is no longer looked upon as being transmitted through heredity; we know too that the nurse, the doctor or the attendent cannot contract the disease, even though they may handle and dress hundreds of cases. Indeed there is no authentic record of the disease having been conveyed in this way. Neither have we any record of Cancer having been carried by contagion, as is scarlet fever or diphtheria.

We do know, however, that a malignant growth can come through chronic and continued irritation and the evidence becomes stronger and more convincing as the years go on. In over fifty percent of the cancer developing in the people of Kashmir, natives of Thibet, it is located over the lower abdomen, or between the thighs, where the heat of the little kangri basket loaded with live coals, carried through the long winters, has blistered, scorched and irritated their skin.

The same is true of the natives of India who continually chew the betel-nut, and develop, as a result, cancer of the mouth.

There is some advantage in the Chinese woman being so subservient to the man that they eat at the second table, when the rice is cool, while their lordships swallow this food hot, and so there is an inordinate incidence of cancer of the oesophagus and stomach in these self-anointed Oriental aristocrats.

Has it ever occured to you that should a thermometer be plunged into the broth, oatmeal or coffee you use daily that the mercury would register at the blistering point? Yet you will daily swallow these scorching foods, and thus ruthlessly and without thought, subject the upper digestive tract to a trauma which spells potentially Cancer.

Not long ago we tested the noon-day soup with a perfectly good thermometer, and were not surprised to find that it registered 175° F., and yet you wonder why we preach this gospel of prevention.

Over 100 cases of cancer of the lip and mouth and tongue were recently analysed at a large clinic in the east, and over fifty percent of them were found to have their origin in the daily friction of a rough, hot pipe, or a ragged tooth—and surprising as it may seem, upward of twenty-five percent of the lip cancers were regarded as an over-active fever-blister.

What is commonly known as skin cancer never develops on a normal surface, but seeks the site of a lawless cell-area, found in a birth mark, a wart or some dark mole. Right here we wish to wage war on the 2nd stay, whalebone or steel of the modern corset. Every surgeon within my hearing has many times over found this insiduous daily irritation starts the sore which leads to a fatal malignancy in the female breast.

When these little beginings are seriously regarded, when the little red flag or danger signal of Nature makes men stop, look and listen, and when these beginings are subjected to the wise scrutiny of well directed medical counsel, when the factor of delay has been forever eliminated—then and only then will the millennium of this cancer problem be

reached, and one hundred percent of cures be registered. You call this Utopian and impossible,—we, as physicians and surgeons, know it to be as true as the law of the Medes and Persians, or as sound and unimpeachable as the Holy Writ.

Just as every great conflagration has been preceeded by the tiny spark, the unstruck match, the oil-soaked waste—so a definite warning in the shape of a little lump, a stubborn ulcer or an irregular bleeding, may be the forerunner of a fatal cancer. Any one of these signs or conditions may never lead to a fire or a malignancy; yet he who would safeguard his property removes the factor that may reduce a home to charred ruins—or have an intelligent and competent examination of the suspicious sign that may lead to the destruction of a priceless life.

The question is frequently asked: How does cancer become constitutional? The lamented Dr. Rodman has answered this question in a clear-cut and satisfactory way. Cells from the first lump may at any time be scattered along the lympathic vessels, which are more or less numerous everywhere in the body. In some tissues they are more plentiful than in others. A cancer of the tongue may and frequently does cause death in six months, whereas a skin cancer may pursue a slow course and not strike a vital spot for many years.

I call to mind a skin cancer which had been treated with pastes, the x-ray, and later the surgeon's knife, and it was eighteen years before it invaded vital centers. In time everyone should know that any form of cancer is fatal unless seen at its inception and thoroughly eradicated. This is the crux of this whole malignant problem, and the message we would have every person in this audience take home to-night.

This subject of cancer should be of monumental importance to the American woman. Why? Because we definitely know that between the ages of 35 and 45 there are three times as many women as men yield up their lives to this disease, and between the ages of 45 and 55 twice as many. The reason for this is well known. Almighty God put the great burden of responsibility of child bearing on womankind. The womb which tenderly shields and nestles the unborn child in its development, and is so often unavoidably injured at the time of birth; and the delicately constructed breast which has the Divinely appointed function of providing nourishment.

The subject of cancer of the uterus has been mentioned. Formerly it was most hopeless, but to-day because of the possibility of early recognition it is among the more hopeful localities.

Any woman should know that any change in the menstruation or any alteration in the normal discharge should be investigated. Ulcers, erosions or old unhealed lacerations resulting from child bearing must receive attention.

The encouraging part of this subject is that such defects or lesions are remediable by a trifling local operation of repair. These signs are not necessarily indications of cancer, but are the little red flags we would have you regard and investigate.

Pre-cancerous lumps in the female breast are, perhaps the most hopeful and curable form of new growths, this is because of the comparative ease with which the diagnosis can be made.

Any tumor, lump, cake, weed or swelling; any discharge from the nipple, of a watery or bloody fluid, a retracted

nipple surrounded with any crust or hardness, demands a full and complete examination by the family physician. Should he express the slightest doubt then it is your imperative duty to consult a specialist. This is a definite warning to a woman over 30 years of age, particularly to those who are not nurs ing children.

There is one thing so frequently encountered in the women that may almost be regarded a symptom of the disease, a sign far too frequntly observed by the physician, and stressed so earnestly by Dr. Rodman: That is, a tendency to suppress all knowledge of the existence of a growth or lump. The patient will venture as far as the physician's office, but it is only after urging that a full and complete examination is permitted. How many women there are who artfully conceal a cancer of their breast from the members of their family, until the growth has become inoperable. Such reticence is encountered less frequently now than formerly, possibly due to a better knowledge of the subject through just such campaigns of education as we are now waging throughout this commonwealth.

The American Socity for the Control of Cancer owes much to Dr. Bloodgood for his scholarly messages of hope on this subject. With regard to these breast tumors, Dr. Bloodgood has hopefully written: "If the lump a woman finds in her breast is subject to treatment at once, the chances are fifty percent that it is not cancer. In such a fortunate event it is only necessary to remove the lump. When the surgeon at this operation finds that this growth is cancer the chances are one out of four that it is the least malignant form of the disease, in which the probabilities of a cure are one hundrel percent."

"If the lump proves, after microscopic examination, to be a more malignant form of cancer, the probabilites of a cure are at the worst eighty-five percent, and there is now sufficient evidence to indicate that this can be greatly improved."

The kidney and bladder are not exempt from malignancy. Frequent urination with the presence of blood in a patient past forty should be investigated. The modern methods, with ingeniously devised instruments and skilled technic, almost preludes the possibility of diagnostic error in this part of man's anatomy, and complete eradication is as certain as in any part of the body.

One word about cancer of the rectum. The presence of bloody stools in a person past 35 years of age does not always mean hemorrhoids, or piles. Particularly if attended by loss of weight, or pain. An examination will quickly clear up all doubt, and it is always your duty to insist on one being made.

FAKE CURES

Beware of the fake cures and the imposter specialist. Such a warning is altogether fitting and proper in a talk of this kind. As a rule these so-called cures are brought to the notice of the public under the names af drugs and pastes.

While some of these preparations are harmless, we wish to emphasize the fact that they are absolutely valueless. The sorrowful feature of the whole question is that while they are being used the ever-trusting patient is losing precious time, as the disease goes on in its destructive course far beyond the curable stage.

Every busy surgeon has repeatedly seen destructive and unsightly holes eaten into the face, or a misshapen nose due to the over zealous use of the arsenic

paste. Theese preparations are so frequently applied for the relief of some innocent wart or mole, which could easily have been removed, without scar, by the clean scalpel.

Those of us who are doing surgery have repeatedly had evidence of unnecessary mutilation to repair by plastic reconstruction, because, forsooth, the trusting patient has listened to the exploitation of these nostrums in preference to the wise counsel of their family physician.

Remember, such remedies are not only deforming, but they stimulate activity in a malignant growth.

Remember the advertisements and testimonials of the self-anointed "cancer specialist" and institutes are outrageous fabrications, and are, for the most part, based on the removal of some innocent growth which was not cancer at all.

RADIUM AND X-RAYS

Radium and X-Rays are definitely useful in the hands of the skilled specialist, but they have their limitations. The skin cancer, or epithelioma, as seen on the face of the aged, or where it occurs about the eyelids and nose, and where it is manifestly undiserable to use the surgeon's knife, will yield successfully to these agents, thus preventing any disfigurement or mutilation.

What is known as the cross-firing use of the X-ray has been found almost unerring in its search for the hidden cancer cell. Certainly the X-ray will help complete the cure after the total extirpation by surgical operation.

It is well known to you how our recent distinguished visitor, Mme. Curie, after untiring efforts and experiments in 1898-1900, isolated two radio-active elements from pitchblende, (oxide of uranium) to which she gave the name polonium and radium.

Radium is only at the threshold of its great career in dealing with certain phases of this cancer problem. At present we know that it emits a healing ray which penetrates deeply into the tissues and retards or causes a retrogression of malignancy. It musst be remembered that it is not free from danger, and can only be used by those who have carefully studied its properties and understand its destructive power. It is particularly useful in growths found in the mucous cavities of the body. Radium is rare and very expensive, the amount you could place in the smallest capsule would cost hundreds of thousands of dollars.

The role of the electric cutery, or what is known as disiccation or coagulation, is far-reaching and important, and has yielded excellent results on cutaneous surfaces and about the mouth.

But when all has been said, the skilled surgeon will exercise that discriminating judgement, as to the method of attack, which will ever be for the best interest of the one who suffers.

The syllabus prepared by the National Executive Council of the American Society for the Control of Caner presents this interesting summary: That the ravages of this disease can be diminished by the dissemination of knowledge leading to the early recognition of the disease by the patient and physician. This Society, the various medical associations, boards of health, insurance companies, women's clubs and other agencies, are endeavoring to bring to the people the message of hope that cancer is absolutely curable if treated early. These facts are being established by the work of research laboratories and hospitals, and the improving statistics of clinics, insurance companies and public authorities.

As Dr. Powers, the President of the American Society, has so well said, we want to bring the members of our own profession to a better realization of their responsibility. We want the people to know that their responsibility is equally important, and then we will all get squarely behind this movement.

Rector has wisely said, "Thoughts of to-day are translated into action to-morrow."

It is our opportunity, it is our privilege, it is our duty, to use whatever power we possess to bring about a happy consummation of this vital task.

The medical profession when backed by the whole-hearted laymen, has never failed in time of need; with one mind and one purpose, shoulder to shoulder, for the common weal, we will, by the help of God, cut this accursed cancer mortality in twain.

Before closing I want to pay the homage of our grateful appreciation to those patient and untiring workers of the research laboratories, those who have placed at our disposal the modern methods of control and the implements to fight this enemy of man. I particularly want to avail myself of the opportunity of addressing the people in this Capital City where the laws are fashioned, discussed and made a part of our code.

Abroad in the land there is a class of dreamers who style themselves the Anti-Vivisection Society and the Society for the Prevention of Abuse in Animal Experimentation, and annually they have caused to be introduced before the law makers, bills maliciously designed to restrict the use of animals in experiments, conducted for medical or other scientific research.

These people would exact tribute of science and humanity by their rash effort at prohibitive legislation as mercilessly as did the robber barons of the middle ages.

Their charges of unwarranted cruelties deliberately inflicted on animals by scientifiic experimenters are as basely false as they are preposterous. Their sentimental and exaggerated statements are most sweeping, and no authentic case substantiating their reasonless claims has been brought forward in support of these assertions in recent years.

In the name of right and reason, justice and humanity, permit me to ask you tonight, who are the merciful people? The few physicians who superintend the making of antitoxin, which cures diphtheria, cerebro-spinal menigitis, and lock jaw? The men who are giving their lives searching for a remedy to control cancer? The scientific men, who mercifully conducted the experimental research which stamped yellow fever out of North America, or the hysterical fanatics who cry out against this work? These same women, God forgive them, will ornament their Easter bonnets with aigrettes from the innocent white heron, plucked and thus killed while nursing her young, or with a wing from the mother pigeon of St. Maurice, beautiful birds now almost exterminated, because, forsooth, of the greedy demand for their God-given plumage.

Did these same people ever stop to reflect that there is more suffering indicted upon animals in a single day in a single slaughter house where the meat for their dinner is prepared than in a year or years, in all the scientific laboratories for experimental research in the United States.

Let the opponents of animal experimentation deny themselves all food which has been purchased by animal

death and suffering; let them refrain from wearing furs, and the fur-lined coat, collared with an astrakhan pelt, ruthlessly torn from the warm body of the innocent lamb before its natural birth, and feathers which have been obtained by slaughter and cruelty; let them go barefooted rather than put leather on their feet; let them linger in the clutch of painful disease rather than take advantage of a cure that has been born of experiments on others, and then they may have a right to be heard.

Far be it from those of us who are waging this crusade to, in the smallest way, terrify, discourage or alarm. This Society is laboring with altruistic earnesstness to bring to you people a balm of hope, a confidence of relief, a good omen right from the blue sky of assurance.

As physicians and as members of the Cancer Control Society, we are only desirous of teaching the public, in a tactful way, those facts we know to be true. Remember the hopeful part of this problem, that sevety-five percent of these little lumps and suspicious signs will be found perfectly innocent when brought to the test, and remember that the other twenty-five percent definitely known to be the begining of cancer, when taken thus early, are one hundred percent curable.

We want to tear away the mask of mysticism, and deal to you God-branded truths as we know them.

Let me repeat, we wish forever to wipe out, eliminate if you will, the factor of delay in those cases who seek relief too late.

We mean to carry this fight to every county and hamlet and cross-road schoolhouse in our little mountain State, and make the message so plain that "he who runs may read."

We want to tell you people, without equivocation, that when you delay in this cancer game you are gambling with a ruthless Shylock, who will demand more than the pound of flesh. When you delay your broken body pays the price—the cards are stacked and the odds against you.

So, play fair with yourself, heed Nature's warning, and you most certainly will win out.

Irrespective of what is done in other States, our own Commonwealth of West Virginia means to work out her own salvation on this cancer problem, following the teaching of Dr. Powers and the American Society, and with your cooperation we mean to hold aloft the torch of progress.

Every man and woman in my hearing may have a part in this work, by giving their approval and hearty support to those who are shouldering the big responsisbility, remembering that "In the health of the people lies the wealth of the Nation."

By this willing service we will not only uphold the tenets and traditions of an honorable profession, but we shall all, physician and layman, be working toward the end, that the whole truth of the Cancer problem may be revealed to the immeasurable advantage of our brother man.

Note:—National Cancer Week, October 30 to November 5, inclusive. It is the duty of every physician in the State to lend a helping hand in this nationwide campaign.

"SOME PRIMARY FACTORS IN THE TREATMENT OF MENTAL DISEASES"

By Carl W. Sawyer, M. D.
Sawyer Sanatorium
White Oaks Farm
Marion, Ohio.

Read Before Marshall Co. Medical Society.

Gentlemen:

It is my desire tonight to discuss with you relative to some primary anatomical and physiological facts regarding the nervous system and from these to deduce some general conclusions relative to the Treatment of Mental Diseases.

In an earlier paper, "Some Suggestions in the Treatment of Mental Diseases," a more detailed and specific statement has been made as to how to meet the various conditions presented by the mental case.

In order not to go over ground which is already familiar to you, specific instances as related in the former address, will be dispensed with in this one and we shall cling more closely to definite, scientifically investigated facts that have been brought out relative to the brain proper. I trust that my line of reasoning will prove interesting and helpful to you in getting a deeper insight into your cases and in the end that it may prove logical.

I might add that the deductions made here tonight have been used by myself for a number of years in the treatment of Mental and Nervous disorders. They have helped me wonderfully in arriving at more proper forms of therapy and have assisted me greatly in carding out of the numerous almost endless suggestions for treatment, the correct ones to follow. More interestingly yet they have brough to a successful termination many cases that treated empirically would not have recovered. And what is more satisfying, they have made me very cautious in my statements as to the outcome in certain classes of cases and in many instances caused me to conclude early that I had a condition which could not be successfully treated.

The scientific facts used have been established by that splendid and painstaking group of workers, who are endeavoring so vigorously and carefully to place the anatomy and physiology of the brain on a logical and secure basis, and consequently they can be accepted as true. The deductions in many instances are my own and consequently are to be accepted with some grain of salt that we accept the pet theories of any one investigator. Please judge them and weigh them carefully. If they sound logical put them to trial. In my own practice they have given splendid results and I trust they will do the same in yours.

In the begining let us turn to the unit of structure of the brain, that is the neuron, and review slightly its characteristics. As we understand it now, this structure consists of three parts. First the soma, or cell body; second the dendrites; third the axon. The cell body possesses practically the same characteristices as all other human cells; i, e, a limiting membrane, a cytopalsm, a nucleus with chromatin bodies and as a general rule several nucleoli; but it is lacking in one marked and important charateristic, that is the centrosome. This fact we shall take up later and use in our discusson.

The cell body in that portion of the

nervous system which we call the brain and where the mental activity takes place is as a general rule of a pyramidal shape but in certain regions it may be pyriform, globular, stellate or fusiform. Recent investigation has shown that this cell body contains several very interesting structures. First of all are the intra-cytoplasmic canals. The exact physiological function of these canals is not known, but they are generally regarded as lymph channels which are in connection with pericellular lymph spaces surrounding the neurons. If this is true they have a great bearing upon therapeusis and one could indulge himself in a wild field of speculation, but we shall resist the temptation to go afield here and pass along to more important considerations.

Another marked characteristic of the pyramidal cell is the chromophilic substance, which is commonly known as Nissl's bodies. Great significance has recently come to be attached to these substances.

In the first place it has been found that nerve cells can be divided into four groups, according to the arrangement of these bodies within the cell, so they serve as a means of anatomical differentiation of different types of cells.

The actual functional significance of the Nissl's bodies is an unsettled matter, but they are conceded by all investigators to be of great importance. It is generally thought that they have something to do with the energy of the cell and more than likely with its nutrition. We shall deal with them more fully later.

Other cell pigments are also oftentimes found, some so marked in fact that they give a peculiar tinge or coloring to the cell. Their significance is still unknown and offer an attractive field of investigation for our younger researchers.

Other interesting structures in the nerve cell are the so-called Neure-fibrils. These are fine fibres which enter the cell by means of the dendritic processes and converge toward the axon. They form a complex network throughout the cell. They are possessed of a marked dynamic polarity permitting impulses to enter at one pole and leave at another and they are undoubtedly the organ of conduction through the neuron. Their polarity is a very important factor as we shall see when we come to study the synapse later. As in all other cells of the body so in the brain cell, we find a nucleus, which in all other characteristics excepting one, is the same as the nucleus of other cells.

Extending from the cell body in various places are protoplasmic processes called dendrites. These, after leaving the cell body, divide and redivide and give off numerous branches; there may be all the way from one to ten of these dendrites connected with each cell. They have several important characteristice and can usually be differentiated from the axon by the fact that their body is thicker. Their function seems to be to make synaptic connections with axones of other cells and they never pass outside of the gray matter. They contain numerous Nissl bodies.

Extending from the cell body at one point is a structure known as the axone. This is a bundle of neuro-fibrils and in differentiation from the dendrites does not contain the same elements as the body of the cell itself. Another feature is that the axone always conducts impulses away from the cell, while dendrites conduct them toward the cell. This feature being due to the fact, as stated before, that the nenuro-fibrils, of which

the axone is composed, have a marked polarity.

The axones vary in length from a few millimeters to many centimeters. In some cases they never leave the gray matter and in other instances they may extend from certain areas of the brain into the spinal cord and even into the peripheral nerves. Several other featurse differentiate the axon from the dendrites but we shall not go into details here.

We thus see that the primary structure upon which all therapeutic measures must rest, and the primary structure that we are ultimately aiming to treat, consists of a cell body; certain processes which extend out into ramifications and collect stimuli; and a single process with a few right angled branches, which extends a greater or a lesser distance, and through which the afore mentioned stimuli are trasmitted, to other structures. Each portion of this mechanism has its own characteristic feature, its own work to accomplish, and is affected in its own particular way.

Having now before us a fairly well formed picture of this primary organism, let us take some of the features presenting and see what analysis of them will bring to us.

First of all, let us return to the statement which we have already made, that the nerve cell has the same metabolic characteristics as all other cells save one, that is it has no centrosome. Since the centrosome is to be regarded as the initiator of cell division we find that the nerve cell lacks a prominent and important function. In other words, it cannot reproduce itself. This fact is of great significance in diagnosis, prognosis and treatment.

Please notice that we say the cell has no ability to reproduce itself, we do not mean that it cannot rejuvenate itself. The nucleus gives it this last property and as we shall see later, the nerve cell can do this to a remarkable extent. For the present we wish to confine ourselves to the statement that it cannot reproduce itself.

If we remove or have removed from our body, a fairly large piece of cuticle, we fully expect by careful surgical proceedures to have the defect rectified, leaving what is commonly called a scar, that is a piece of skin differing only slightly from the original layer of skin. Careful, microscopical examinations made as this scar forms shows us that new skin cells are formed and that the defect is eventually filled by these new cells. Were we to remove a piece of muscle the same thing would transpire unless the defect was great; and so it is in all tissues of the body, we expect them to reproduce themselves to a very great extent. Do not confuse this with the reproduction of parts. We are talking of cellular reproduction only.

In the brain, however, owing to the absence of the centrosome in the cell, we cannot expect this same feature to transpire, consequently, we must necessarily conclude that when brain tissue is absolutely destroyed, as in accidents to the cortex, new tissue cannot develop. This destruction need not be from trauma alone. It may come about from(1) micro-organism as in acute anterior-poliomyelitis, from (2) loss of food, for instance in arterial degeneration of the brain; marked cases of starvation, thrombosis, embolism and the like. It may come about from (3) anaemia, or (4) hyperaemia, from(5) exhaustion due to over use. From (6) chemical substances coming from without the body and

transmitted in the blood, arsenic, lead, etc., and more than likely from (7) toxic substances generated inside of the individual such as acetone, carbon dioxide, diacetic acid, etc.

Unfortunately, we have no definite means of determining when the cell is destroyed, but by careful investigation, we can oftentimes determine the length of time the damaging material has been acting and its type, and consequently we can conclude that certain areas are totally missing. For instances long continued arsenical or lead poisoning or alcoholism, we have learned from experience, destroy certain areas and consequently disrupt the proper continuity of thought. Marked arterial conditions or emboli or thrombi cause us to conclude that areas are degenerated and that consequently therapy directed toward immediate recovery is useless and that total recovery is impossible.

Our first deduction is then, that owing to the fact that the nerve cell does not contain a centrosome, we must not expect therapy to reproduce cells that are permanently destroyed. Lost brain tissue is permanently lost, in other words.

I wish to digress long enough here to explain a clinical fact which some of you may think controvert the statements just made.

It is a well known observation that an individual may have an apoplexy which destroys the brain tissue, paralyzing we will say an arm. After a number of months or years the function of the paralyzed member may return. Later it is found at autopsy that the brain tissue was actually destroyed and was still absent although the function of the arm had come back. The fact that the autopsy disclosed that the brain tissue was still absent, proves that the resumption of function of the parts was not due to the regeneration of new tissue, but more than likely was due to the fact that other areas assumed the work of the part destroyed. Little is known regarding the processes that take place in this condition, but animal experimentation has proven beyond a doubt that this state of affairs actually does take place.

If this occurs in the motor area, we can logically reason that it also more than likely occurs in the mental area and from this we can reason that therapeutic measures, especially headed toward re-education may ultimately bring results even though the cellular tissue itself is lacking. We should always keep in mind, however, that motor function is not regained if the area of destruction is great and that motor function is not always perfectly regained.

Many of the finer movements in the members regaining their functions are never recovered. Consequently while we may get a certain amount of mental activity in the cases of degeneration in the intellectual areas, it will never be perfect.

This pecularity of other nerve cells to assume the functions of degenerated ones, explains some interesting observations. Recently one of our State Hospital Superintendents remarked that we no longer had the old time maniacal case, that was locked in a strong room for years in succession, but that in their place we had many trusties, people who were sufficiently oriented to move about in a restricted circle, but not of sufficient mental caliber to care for themselves at large in the world.

The explanation of this observation, which is very true, is that under the broader lines of re-education, occupation therapy, careful feeding, etc; the pro-

vocative, irritating cause is removed and the defect of the center destroyed, is to a great extent made up by surrounding areas, just as in the case of motor paralysis.

This abiity for one cell to take on the work of another one also probably explains part of the seeming recovery of the Paretic, after he has reached an almost hopeless state, and of the Dementia Praecox case, who having gone into the depths of physicial and mental depravity, regains a sufficient amount of mentality to live many years of handicapped existence.

It also indicates that therapy is justifiable even in our most hopeless mental cases and that this therapy must not always be contented with removing the original cause of the disease, but also headed to limit the destruction of tissue and above all things else to awaken to their highest potentiality surrounding neurones.

Believing in the aforesaid statements, we have repeatedly urged treatment in marked senile cases, relying upon the facts just explained to retrive a certain amount of mental activity, thereby making it possible for the patient that actually has a degeneration, to live at least comfortably and happily in the world. As we number among our clientele a large group of individuals who, while far from being normal and able to meet the vicissitudes of life, are yet able to be with their people at home, fairly useful and at least comfortable and contented because surrounding tissue to that destroyed has been, as we believe, so stimulated and nourished that it has assumed superficially at least, the lead of the tissue destroyed.

Our second deduction is then that owing to the fact that other nervous elements may assume the functions of destroyed areas, we are justified in treating along certain lines cases where our examination leads us to believe tissue is actually destroyed.

Next we wish to consider the role played by these chromophilie substances known as the Nissl's bodies.

As stated earlier various opinions are held relative to the functions of these particles. The general conclusion being that they have something to do with the nutritional reserve store of the cell and with the cell's ability to produce energy. That they have much to do with so called fatigue is proven beyond a doubt. That they also play an important part in true exhaustion is also unquestioned.

Nerve cells examined in the resting state usually display the Nissl bodies about equally distributed throughout the cell. Of course the exact form of distribution depends upon the type of cell as stated earlier in our discussion.

Cells from the same portion examined before and after activity, are found to have changed considerably. Following activity the cells shrink in size and the Nissl granules gradually lose their conspicuousness and if the fatigue has been excessive, finally disappear altogether. Permit the animal to rest and the Nissl bodies are again apparent as before in the case of mild fatigue In other words, we begin our days work with an equal distribution of Nissl bodies of good visibility throughout the cell. By night we find the Nissl bodies retracted toward the axon hillock and many of them lacking or but faintly visible. Permit us to rest over night and the distribution and visibility are equal and good again. However, omit the rest, continue the activities excessively and the animal

succumbs to a paralytic condition of the part over activated.

In many instances long continued rests will bring about a recovery, but carry the activity to the point where the Nissl bodies are entirely destroyed and no amount of rest will bring back the function.

It stands to reason then, that the Nissl bodies certainly have to do with the metabolism of the cell. Let us go a little farther into this discussion. Fatigue, as we know it at the present time, can be brought about in two ways. First, by causing an accumulation of waste product. Secondly, by exhausting the reserve nutritive material of the cell Numerous experiments go to show that fatigue is nothing more or less than an accumulation of waste product in the body, and that these waste products consist to a very great extent of carbon-dioxide, various acids and phosphates. Exhaustion on the other hand is a destructive process and results from the loss of stored up food supply.

Until recently it has been thought that nerve tissues were not greatly influenced by loss of oxygen and that activity of nerve tissue did not produce carbon dioxide.

Tashiro in his work at the University of Chicago has proven that the nerve cell is more sensitive to the loss of oxygen than any other tissue in the body, and that its production of carbon dioxide is very great.

Consequently, we can safely make, as our third deduction, the therapeutic conclusion that we must stop mental and physical activity in our mental cases of a fatigue type, as completely as possible, and that we must endeavor in all ways to eliminate toxic substances from the system. It would be too tedious to go into the many conditions causing toxic substances. At the present time the subject of focal infection is standing out paramount in medicine. One of the charateristic features of focal infection is that it pours into the system constantly materials that rob the cells of the body of oxygen and load it with acid substances.

We find in our work that the most consistent finding in mental cases of the diseases type is diacetic acid in the urine. Rest in all manners that it can be obtained, decrease of motor activity and elimination of substances from the body certainly then are indicated upon an anatomical and physiological nerve cell basis.

Exhaustion, the other condition produced by fatigue beyond the point of recuperation, is as shown by various observers, nothing more or less than a complete destruction of the Nissl bodies and as we stated earlier, it is thought by many that the Nissl bodies are nutritional reserve stores in the nerve cells. So we may also conclude that in cases where exhaustion is playing a part, we must increase the food supply to the individual. It is our custom in our work to overfeed all of our patients.

The question with us is not so much the kind of food that they take as the volume of food that they receive and the manner in which it is handled by the system. Most of our therapeutic measures in this type of case, are headed toward an accumulation of adipose tissue in the individual. We repeatedly use the scales as an indicator of the progress of the recovery of the case in spite of any change that may or may not come in the mental state of the individual.

Do not mistake me by concluding that a gain of weight is beneficial in all

mental cases, I am speaking of the fatigue and exhaustion cases solely.

It is interesting to observe that Gurd in her Dementia Precox studies and Crile in his Exopthalmic Goitre studies and other workers studying the brains of individuals, who have been exceptionally active either mentally or physically, have all found that the Nissl bodies have practically disappeared. In other words, that the food content of the individual, as far as the brain cells were concerned, was lacking.

Clinically, we have found the same conditions to exist in cases of Psychosis accompanying Pulmonary Tuberculosis. They are emaciated with small reserves of fat generally throughout the system and usually toxic because of diminished oxygen and carbon dioxide interchange.

If the pulmonary disease process can be stopped, more oxygen brought back to the patient, a better food supply esstablished, oftentimes the mentality will reappear. Repeatedly we have seen Dementia Precox cases slowly gain in weight and eventually make seemingly good recovery, to be followed later by slight decreases in weight, and recurrence of mental symtoms, followed by another recovery upon the regaining of the adipose tissue. In fact we consider a gain in weight as one of the primary conditions in the betterment of this type of case.

Some of our cases have been under observation by ourselves as long as sixteen years and we have a number, where after they have learned the lesson that their bodily weight must be maintained, have not had recurrences in many succeding years.

We also believe that this is one of the great factors in the recovery of Manic Depressive cases and in their maintenance of a normal mental state. Paretics are invariably better when they can gain weight, provided it does not go to an excessive point. Psychoses accompanying diabetes are almost always better when the weight begins to increase.

Do not mistake me as saying that the gain of weight is the only necessary factor, but in the paretics, for instance, we have found that they will not respond mentally to the best anti-syphilitic line of treatment unless their general bodily state improves likewise and almost invariably the recurrence of the condition is associated with a loss of weight, which as a general rule preceeds the mental breakdown.

We are safe in drawing our fourth deduction as follows;—

Since the Nissl bodies evidently represent a reserve store of energy, and since their disappearance usually marks the death of the brain cell, it is very necessary that we should in every way possible increase the general metabolism of our mental cases due to exhaustion.

The last anatomical feature that we wish to consider is the synapse. At this point in our discussion imagination runs rife and speculation is limitless, so we shall endeavor to confine ourselves to a few of the more well established facts regarding this strusture.

The synapse is known as the place where the axon of one neuron comes into physiological relation with another neuron.

Structurally, there is considerable contention as to the exact nature of this union. The name, itself, signifies a fitting together as distinguished from a growing together and the best histological preparations show that where the neurones approximate one another, there is a distinct cellular membrane around

the terminals of the fibres of the two neurones.

As stated earlier, there seems to be a very definite polarization of the neuron. Impulses travel to the cell body from the dendrites and on out over the fibrils into the axon up to their termination at the synapse. It is generally conceded that the neuron itself can conduct either way but consequently that the polarization is due more to the synapse than to the neuron itself. In fact it is very generally believed that nerve impulses can progress through the synapse in only one direction. Another feature is that the transmission of the nervous impulse across the synapse involves a delay greater than that found in the nerve fibre or the cell body. It has also been proven that the synapse is more susceptible to certain toxic subsances, for instance nicotine, than is any other part of the nerve tissue.

This causes us then to conclude that in the synapse is one of the very important features of nerve condition and also one of the points where marked medicinal action may take place. Some writers, for instance Ladd and Woodworth, believe that in the function of this synapse lies what we commonly call "consciousness." We certainly are justified in concluding that at this junction is the point where nerve impulses are either retarded or sped up.

This being true we naturally see that it is the point of attack in therapeutic applications, especially in cases of Melancholia and so called depression, and also in those cases where we have excessive mental activity, as we often find in Manic Depressive Psychoses and the Paranoid types of Dementia Praecox. In the one instance toxic states developed in the body increase the resistance of the synapse and mental activity is greatly delayed. In the other one toxic materials generated in the system, increase the sensitiveness of the synapse and metal activity is sped up. Here possibly, is where the active principle of the thyroid asserts itself. It more than likely acts as a regulator to the synaptic sensitivity.

Upon the removal of the thyroid or in hyposecretion a decreased action takes place and the synapse is dulled.

In hyper-secretion, as we find in exopthalmic goiter, the synapse is made overly sensitive and mental action takes place rapidly, thereby greatly fatiguing the nerve cell itself.

At this point in the nerve structure, lies one of the most prolific fields for future investigation. As yet but little is known, but from the little it seems that at this point the greatest amount of drug activity takes place. It is very possible here that Chloroform and Ether assert their influence; that bromides have their greatest beneficial effect; that nicotine, alcohol and other chemicals produce the effects which increase mental activity; that chloral; the coal tar products and various other remedies assert their quieting influence.

From the little that is known we can feel sure that drug medication in many instances is certainly justifiable, and that we can roughly classify our remedies into two groups.

First, those that raise the threshold, thereby lessening mental activity and saving the neuron from destruction and secondly those that lower the threshold increasing mental activity and causing the neuron to function more rapidly. In the one instance we quiet the agitated and maniacal state and in the other we

arouse the depressed and melancholy attitude.

Our fifth and last deductionis then that due to the fact of the sensitiveness of the synapse to certain chemicals and internal secretions, we are jusstified in using intelligent medical measures in treating mental cases.

In conclusion then, it is safe to state the following facts relative to the treat ment of mental disease.

(1) Nervous tissue, owing to the fact that the neuron has no centrosome, cannot reproduce itself when destroyed, consequently all therapetuic measures dealing with this type of structure must be undertaken with the idea of rejuvenating tissue, and not re-creating it.

Our efforts must be directed toward conserving the neuron and in protecting it from destructive processes such as intoxication, fatigue, starvation, over use, etc. Conversely, we might state that usually the earlier a patient is placed under treatment, the greater will be the chances of recovery. Also we may conclude from this that in this branch of modern medicine, as in all others, prophylaxis and prevention give us the greatest chance of having normal individuals. In fact in many disorders, owing to the condition that many mental features are not properly interpreted and many mental cases are not realized as being sick until an immense amount of damage has been done, (Paresis for instance, chronic Alcoholism etc,) prophylaxis and prevention give us the only opportunity of recovery that we have.

To often by the time we as physicians see the case the condition has become hopeless or only partially recoverable.

Secondly, the other nerve cells may assume the functions of degenerated ones, if they are properly aroused and re-educated. Herein lies the foundation for our present re-education and occupation therapy, selective work, suggestion and the like. While we are justified in pushing all of these measures, this ability for one cell to take such proceedures must be adopted with the greatest of caution and intelligence in order that we may be sure that we are arousing the correct centers to give the proper assistance.

It also admonishes us to painstakingly treat many of that great class who are now called Insane and allowed to drift into total hopelessness, or rather to be forced into hopelessness by the paucity of stimuli in their surroundings.

Thirdly; Since toxaemias are the basis of fatigue states and since fatigue either mental or physicial, affects the brain cell, it is incumbent upon us to eliminate from the system in all ways possible, toxic substances and to remove this source of production.

Fourthly, owing to the fact that the nerve cell itself in its activity consumes its nutritional reserve store, we are cautioned to rest the cell in all ways possible and to enchance as much as we know how the general nutritional reserve of the body intoto. In this lies our justification for demanding physiological rest, at times chemical rest, rest secured by mechanical restraint, rest from change of occupation and thought, rest from agreeable and normal surroundings, rest due to seperation from irritating conditions, such as family incompatibilities, business worries, fears, shocks, etc. Herein also is our cue for the stoppage of the absorption of noxious substances from without, i, e, alcohol, tobacco, lead, arsenic, etc; the elimination of toxic states developed within the individual; i, e, acetonurias, diacetic

acid states, other acidoses, low oxygen content, etec, and here likewise is our justification for over feeding, and the general increase of bodily nourishment, etc.

And fifthly, we must learn to apply intelligently drugs, that have effect upon the synaptic union of nerve cells.

And sixth and lastly, we must recognize that as physicians, it is very essential that we diagnose the mental case early, treat them thoroughly and in numerous ways and realize constantly that they are a class demanding our skill and attention and also a class to which we can bring as great benefit as to any that we are treating.

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GOITRE ENLARGEMENT OF THE THYROID GLAND

By Dr. E. R. McIntosh
Elkins, West Virginia

"The Big neck" as this condition is so often called by the Laity in this section of the Country is a very prevalent affection. It is safe to say that ninety percent of our school girls are afflicted with this malady. Look over the young girls of your acquaintance and notice the enlargement of the Gland in the front part of the neck and you will see a well marked protuberance of this Gland.

There have been many theories set forth in regard to the causative factors in the production of this enlargement.

Some observers have made claims in the past that it was due to a lack of Iodine in the water. Others that it was due to certain chemicals in the water and many other theories were advanced only to be discarded and thrown in the waste heap.

I have been very much interested in late years in the intimate relationship existing between the Tonsils and the Thyroid Gland. From my own personal observation made in hundreds of cases where there is a marked enlargement of the Thyroid we invariable have diseased Tonsils to contend with. Where we have diseased Tonsils in this condition there is a continual absorbtion of the poisonous products given off and more or less absorbtion takes place in the Thyroid causing this gland to hypertrophy. It has been my experience from extensive observation that where the Tonsillar trouble is eradicated that the Thyroid enlargement tends to diminish greatly and in a great many cases disappears entirely. I am receiving reports frequently from Thyroid Cases where there was a marked enlargement of the Gland previous to the removal of the Tonsils and within the course of several weeks the enlargement of the Thyroid Gland diminished from one inch to an inch and a half.

Anyway in any part of the Thyroid enlargements make an especial examinat-

ion of your Patients Tonsils before attempting any other method of Treatment. Eliminate this focal infection point before applying any other method of treatment and you will be surprised at the results obtained. A clipping of the Tonsil in this condition does practically no good. The whole gland must be ennucleated and no Tonsillar tissue should be allowed to remain in the Throat.

In my opinion gained from the examination of several hundred cases the Diseased Tonsils are probably one great factor in the production of Goitre. It is a question in my mind if we would have these enlarged Thyroids so prevalent in this section of the country if the diseased Tonsils were removed early enough before the damage was inflicted upon the Thyroid.

In all cases of Goitre see that your Patients are relieved of all throat difficulties before applying any treatment what so ever to the glandular enlargement.

Book Reviews

THE DUODENAL TUBE

The Duodenal Tube and its Possibilities, by Max Einhorn, M. D., Professor of Medicine at the New York Post graduate Medical School; Visiting Physician to the Lenox Hill Hospital, New York City. Octavo of 122 pages with 51 illustrations. Philadelphia and London. W. B. Saunders Company, 1920. Cloth, $2.50 net.

MEDICAL ELECTRICITY, ROENTGEN RAYS AND RADIUM

Medical Electricity, Roentgen Rays and Radium, with a practical chapter on Phototherapy. By Sinclair Tousey, M. D., Consulting Surgeon to St. Bartholmew's Clinic, New York City. Third edition. Thoroughly Revised and Greatly Enlarged. Octavo of 1337 pages with 861 practical illustrations, 16 in colors. Philadelphia and London: W. B. Saunders Company, 1921.

Cloth $10.00 net.

A TEXT-BOOK OF PATHOLOGY
(Seventh Edition, Reset)

A TEXT-BOOK OF PATHOLOGY. By Alfred Stengel, M. D., Sc. D., Professor of Medicine, University of Pennsylvania, and Herbert Fox, M. D., Director of the Pepper Laboratory of Clinical Medicine, University of Pennsylvania. Seventh Edition, Reset. Octavo of 1111 pages with 509 text ilustrations, many in colors, and 15 colored plates. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, $8.50 net.

TRAUMATIC SURGERY
BY

JOHN J. MOOREHEAD B. S. , M. D., F. A. C. S., Late Lt. Colonel Medical Corps. American Expeditionery Forces, Professor of Surgery and Director of Dept., of Traumatic Surgery, New York Post graduate Medical School and Hospital, Visiting Surgeon to Harlem Hospital; Attending Surgeon to Park Hospital, Consulting Surgeon All Souls' Hospital (Morristown N. J.) Lt. Colonel Medical Reserve Corps. U. S. Army. Second Edition. Entirely Peret.

W. B. SAUNDERS COMPANY
Philadelphia London

THE ENDOCRINES

The Endocriines. By Samuel Wyllis Bandler, M. D., F. A. C. S., Professor of Gynecology in the New York Post-Graduate School and Hospital. Octavo of 486 pages. Philadelphia and London; W. B. Saunders Company, 1920. Cloth, $7.00 net.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., Editor
C. R. ENSLOW, M. D.
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THE BOSTON SESSION OF THE A. M. A.

Those in attendance at this meeting found it highly successful and interesting in every respect.

The registered attendance of 5,506 was the third largest registration in the history of the association. This speaks volumes for our profession since a great number of those present had to travel long distances to attend this year's meeting.

The scientific sections were of great interest to those engaged in these special fields and we general practitioners gained much from them as well. Very naturally one missed a great deal because of the inability to attend two or three meetings at the same time.

To go through the exhibits of instruments, appliances, publishers, the large manufacturing chemists etc, was an event within itself well worth the journey to this year's meeting. One could but wonder how our professional ancestors could have practiced at all with none of these aids. (Parentheticully they did though and except in a few diseases their results were about equal to ours today.) Yet it is very wonderful to see all of these exhibits. Our personal feel-

ing was one of ignorance and insignificance, that we knew so little and because of the hopelessness of being able to "Know it all" about metabolism, laboratory technique, all the drugs of the U. S. P., to operate from Dan to Beersheba and so use all the wonderful surgical appliances displayed. Still there came a somewhat comforting feeling that we can alleviate pain; that we can help in emergencies and that we can get out an appendix if it needs "getting out."

The House of Delegates was a rather "busy" place. There was much to be done. This body appears to your Junior Delegate to be a pretty level-headed aggregation of brains. True there were some members who talk a lot without really saying a great deal. As a casual observer it seemed to me that they had but little weight in the last analysis. The truly "Big" men did not have such a devil of a lot to say, but when they did! It reminded one of seeing a Master Surgeon work.

This is your Editor's first experience as a member of this body. There was a feeling of diffidence not to be overcome at once, yet one could sit and listen and observe and vote. How I wished I could ask them to wait a minute until I could ask "the boys back home what they thought" on certain questions.

There was much done. We hope to be able to give you a more detailed account of the proceedures in the August issue.

In passing it is well to mention that our Little Mountain State was not overlooked for our own Henri P. Linsz is Chairman of the Com. on Sections and Section work.

Then one could not escape that "atmospheric condition" which made a funny kind of prickly feeling run up your back when you passed Paul Revere's home, Old South Church, Boston Commons. Then you had more or less of a feeliing of admiration for your Puritan ancestors when you got up to Plymouth, and looked through the bars at "Plymouth Rock" in its little shed. One could but marvel at the surefootedness of that "hardy crew."

One would be remiss if he failed to express his appreciation of the wholehearted courtesy of the Medical profession of Boston and of the lay citizens with whom we came in contact. They gave us a royal welcome. We extend our thanks for all their attentions and for a pleasant visit.

TONSILS AND ENLARGED THYROIDS

This issue is filled with good food. Read the addresses and papers and you will agree with us.

There is one short paper though that you may over-look. The one by Dr. McIntosh. He has told us of a condition which it is to be feared is frequently not appreciated.

Several years ago we ceased "making a mess' of throats. It dawned upon us that even though we had invested a couple of hundred dollars in snares, tonsil dissectors et cetera ad nauseam, that this was not our work. Since that time more of our patients, old and young, have been operated for these conditions than ever before and at our own suggestion.

For some years past the very condition about which the Doctor objects has been making a greater and greater impression upon us.

Most of the members of the State association are general practitioners. It

is to my fellow members of this large majority that I would call concerning this paper.

If you find a hypertrophy of the Thyroid be sure you rule out the teeth and the tonsils before you go to talking Goitre and begin Iodine, sera of various kinds, injections of boiling water and so on.

Take them to a reliable throat man Do not be bigoted and feel you know as much as anyone can about everything to which the human flesh is heir in the illness line. My specialist friends have cured a number of my Goitre patients by removing some "rotten" tonsils. One or two I overlooked in the begining but since then all enlarged Thyroid cases are sent to the dentist and the throat specialist for an opinion.

Your patients will say "oh," he will want to operate whether I need it or not.

Did you get the Reliable in the para graph above?

State News

The following physicians were registered at the meeting of the American Medical Association in Boston in June; Henri P. Linsz, Wheeling, A. P. Butt, Elkins, Jas. R. Bloss, Huntington, F. C. Hodges, Huntington, E. A. Hildreth 3, Wheeling, B. A. Rankin, Tunnelton. E. A. Teets, Clarksburg, Fred W. Barger, Hiawatha, John E. Cannaday, Charleston, F. D. Fortney, Newburg, Martin V. Godbey, Charleston, W. A. McMillan, Charleston, Joseph L. Miller, Thomas, John Wm. Moore, Charleston, P. A. Haley, Charleston, Chester R. Ogden, Clarksburg, H. E. Osterling, Wheeling, Wm. A. Thornhill, Charleston, W. W. Tompkins, Charleston, John B. Winfield, Clarksburg, Martin L. Somers, Bluefield.

Dr. S. L. Jepson has removed to his old home at Wheeling from Charleston. His residence is at Woodlawn, a former suburb of Wheeling.

Dr. R. L. Devereux who has been located at Wheeling has gone to Sioux City, Iowa to practice his profession.

Dr. G. A. Aschman of Wheeling who was operated on for gall stones is getting along nicely.

Dr. Irwin C. Carlisle, has removed from Elkhurst to Charleston where he is located at 915 Edgewood Drive.

The following members of the faculty of the School of Medicine of the West Virginia University, Morgantown are away doing special work. Dr. Withrow Morse and Dr. Van der Hyde are carrying on research work in the biological laboratories at Woods Hole, Mass. Dr. Aaron Arkin is doing special work at the Rush Medical School, Chicago. Dr. M. L. Bonar, who has done a great deal of boy scout work is spending the summer with a company of boys at a camp in the Canadian woods.

Dr. M. R. Casey, who has been one of Superintendent White's assistants at the State Hospital at Weston, has resigned his position and will leave this week for the Eastern Shore State Hospital, at Cambridge, Md. He has been tendered and has accepted the position of assistant superintendent there, a position which is nonpolitical in character and which he receives as the result of a competitive examination. His position

makes him the house physician to the 350 patients. The institution is comparatively new, having been founded in 1914.

Dr. Casey is a native of Lewis county. He practiced for years at Roanoke, and then accepted the position from which he now retires. He has a good record here and will doubtless make good in his new position. The good wishes of his home county go with him.

Dr. F. G. Heath of Weston was a recent visitor in Baltimore where he attended a meeting of the alumni of his alma mater and took in some lectures.

Dr. Earl B. Gerlach, of Huntington was recently appointed Coroner of Cabell County. He succeeds Dr. L. T. Vinson, resgned.

Dr. William J. Davidson aged 54, for many years a prominent physician of Parkersburg died July 12, following an illness of several weeks from blood poisoning.

The National Convention of the Ame ican Red Cross will be held at Columbus, Ohio October 3 to 8 inclusive. The meetings will be held in the Coliseum on the Ohio State Exposition grounds.

Dr. Livingston Farrand, Chairman of the Central Committee of the American Red Cross has been elected President of Cornell University.

Dr. Charles F. Hicks who served for so many years as Surgeon in Charge of the Miners Hospital at Welch has resigned and gone to Bluefield where he will be associated with Drs. Fox, St. Clair and Rogers in the Bluefield Sanitarium.

PRESIDENT-ELECT GEORE E. DE SCHWEINITZ

The election of Dr. George E. de Schweinitz, professor of ophthalmology of the University of Pennsylvania, places at the head of the Scientific Assembly of the American Medical Association a leader in medical science whose achievements are a stimulus to the medical profession of the country. While following a speciality in medicine, he has kept in close contact with general medical interests as well as with science in general. Dr. de Schweinitz was born in Philadelphia, Oct. 26, 1858, son of the Rt. Rev. Edmund de Schweinitz. He received his A. B. and A. M. degrees at the Moravian College at Bethlehem, Pa., in 1876, and was graduated in medicine by the University of Pennsylvania in 1881. The later institution conferred on him the LL.D. degree in 1914. Dr. de Schweinitz has made many significant contributions to the literture of ophthalmology. including a textbook on the "Diseases of the Eye, Ear, Nose and Throat" in 1889; a textbook on "Diseases of the Eye" in 1892; a monograph on "Toxic Amblyopias" in 1896, and numerous articles and monographs on ophthalmologic and neurologic subjects to periodicals and encylopedias. He is a member and ex-president of the American Ophthalmological Socity, and a member of the American Philosophical Society and of the Academy of Natural Sciences. In the American Medical Association he served as secretary of the Section on Ophthalmology in 1891-1892, and was chairman of the section in 1896-1897. During the war, Dr. de Schweinitz was ordered to active service in September, 1917, as Major in the Medical Reserve Corps. He was shortly promoted to

Lieutenant Colonel and served in France from October, 1917, to March, 1918. Later he was promoted to Colonel and assigned to active duty as Officer in Charge of and Consultant in Opthalmology in the Surgeon-General's Office. By electing him President of the American Medical Association, the House of Delegates recognized not only one of the leading ophthalmologists of the world, but also one of the special branches of medical science to which American physicians have made as great contributions as have those of any other country—A. M. A. J.

AMERICAN PEDIATRIC SOCIETY ELECTS

The American Pediatric Society, at its thirty-third annual meeting, held in Swampscott, Mass., June 2-4, elected the following officers for the ensuing year: president, Dr. Maynard Ladd, Boston; vice president, Dr. Percival J. Eaton. Pittsburgh; secretary and treasurer, Dr. Howard C. Carpenter, Philadelphia; editor and recorder, Dr. Joseph Brennemann, Chicago.

Dr. Wallace Calvin Abbott, who died at his home, 4605 N. Hermitage Ave., at 1:30 A. M. July 4, was born in Bridgewater, Vermont, October 12, 1857. His early education was obtained at the State Normal School, Randolph, Vt., the St. Johnsbury Academy, St. Johnsbury, Vt., and Dartmouth College, Hanover, N. H. Coming West, he worked his way through the University of Michigan, winning his degree as Doctor of Medicine in Chicago, building up a large practice on the North Side and winning many friends.

It was during this time that Doctor Abbott established The Abbott Alkaloidal Company, now known as The Abbott Laboratories, of which firm he was President continuously from the time of its establishment, more than thirty years ago, until his death .

For several years previous to his deceace, Doctor Abbott had been in ill health. Anticipating his active retirement from the large and successful business which he had founded, he placed the conduct of The Abbott Laboratories largely in the hands of his older employees, under a generous cooperative reorganiation plan on which it has been operating for more than two years.

Doctor Abbott was a man of broad vision and great energy. He was an organizer of rare ability, warm-hearted and beloved by his employees, business associates and hundreds whom he had befriended.

Doctor Abbott was a pioneer in the field of alkaloidal medication. He labored incessantly through his writings, and personal contact with thousands of physicians, to bring about a more careful study of the patient, and the treatment of seperate symptoms as they developed, as contrasted with the older method of treating by disease names only. His influence upon the medical profession in this respect has been profound.

Doctor Abbott was co-author, with Dr. Wm. F. Waugh, of several medical books, including "The Practice of Medicine" and "Positive Therapeutics." He was, also, Editor-in-Chief of The American Journal of CLINICAL MEDICINE, now in its twenty-eight year.

For the past five years Doctor Abbott has encouraged extensive research work along the line of new medicinal chemicals. As a result, a number of the remedies, formerly made only in Europe, are now manufactured by The Abbott Laboratories.

Doctor Abbott wa a member of the Ravenwood Methodist Church, The American Medical Association, the Illinois Medical Society, the Chicago Medical Society, the Medical Editors' Association, American Drug Manufacturers' Associiation, Americcan Pharmaceutical Manufacturers' Association, Ravenswood Lodge 777 A. F. & A. M. the Oriental Consistory and the Shrine.

He leaves a widow Clara A. Abbott and a daughter Eleanor Abbott.

Dr. Alfred S. Burdick has been elected to fill the vacancy as President of the Abbott Laboratories, caused by the death of Dr. W. C. Abbott.

He is a graduate of the Alfred University, Alfred N. Y. and Rush Medical College, Chicago. He has been closely associated with The Abbott Laboratories for over seventeen years, and for the past six years has been Vice-President and Assitant General Manager.

Dr. L. V. Guthrie, Superintendent of the Huntington State Hospital, Huntington has been reappointed by Governor Morgan, Dr. Guthrie has served as Superintendent under seven consecutive Governors. He also has been made Medical Advisor by the State Board of Control.

Dr. Henri P. Linsz of Wheeling who attended the A. M. A. at Boston after speding a month at home made a trip to Cape Cod, and from there went to Jersey City to visit his brother and attended the Dempsey-Carpentier fight From there he went to Baltimore, Washington and on home.

Dr. C. M. Hawes of Huntington was east in June and took in the fight at Jersey City.

Office of Dr. L. F. Barker and Associates, 1053 N. Calvert Street Baltimore, Md.

This office will be closed for house-cleaning from Sept. 1 to Sept. 15th, 1921. During the rest of the summer diagnostic surveys will be conducted as usual. In Dr. Barker's absence from July 1st to October1st, his associates, Drs. Cross, Sprunt and Pincoffs will be in charge.

Two copies of the May, 1921 issue are needed. We will appreciate these very much. Send to The Editor.

The Kanawha Medical Society on April 5th was given a very interesting paper of case reports by Dr. Robert K. Burford of Hansford, W. Va. The first case being Hyperthyroidism in a child six years of age with demonstration of the patient. Another case demonstrated was a girl 17 years of age after removal of a very large colloid goitre and the third case was the demonstration of a boy six years of age six months after doing an open operation for congenital dislocation of the hip.

On April 19 Mr. Arch Kreig read a paper on "Prescriptions from a druggists viewpoint" which was very instructive. Dr. William D. Goodman of Racine, W. Va. was elected to membership in the Society.

On May 3rd Dr. J. Ross Hunter of Huntington read a paper entitled "Blood in the Urine" which was freely discussed by a large number present.

MME. CURIE'S FIRST AMERICAN CONTRIBUTION

The July ssue of the Medical Review of Reviews will contain a lengthy original contribution by Mme. Curie entitlec "The Radio Elements and Their Ap plieations." It is, we believe, the firsı and only contribution which this noted scientist has made to an American pub- lication and is extremely valuable. A copy of the July issue eontaining it will be sent gratis to any physician making the request.

Address the Medical Review of Re views, 51 East 59th Street, New York.

Society Proceedings

Barbour-Randolph-Tucker Co. Med. Society.

Dartmoor, W. Va. April 11, 1921

Editor of the Journal.

The B-R-T County Medical Society met at Elkins in Y. M. C. A. Bldg. on April 6, 1921.

The following were present, Drs Miller, Pieree, Leggett, Kerr, Hamilton, Updike, MeIntosh, Talbott, Bosworth. (J. L.) Moore, (S. G.). Wilson, Owens Golden, Perry and Irons. Drs. Farns worth and Waite visitors. The President being absent at the opening, Dr. Miller presided. The reading of the minutes was dispensed with. Under suspension of rules, Drs. J. E. McLear of Benbush and C. E. Watson of Coketor were elected members of the society. Drs. S. G. Moore and G. L. Pierce were eleeted alternates to Drs. J. L. Miller and O. L. Perry previously elected delegate to the State Medical Society.

Dr. Moore read a well prepared and praetical paper on "The Physician as a Dietition." Drs. Hamilton and Talbott discussed the paper. Dr. Moore closing the discussion.

Dr. Miller read a paper on "Anuria" with a report of a case following typhoid fever. Dr. Miller after reciting what meager literature there is on this somewhat rare eondition gave a very minute description of his case, which elicted quite an interesting diseussion by Drs. Moore, Owen and Talbott all of whom had noticed the temporary supression of urine on excessive doses of ealomel, espeeially when given to children and the effects of Santonine and CALOMEL in large doses.

I am sending Dr.Miller's paper to the Journal. Dr. Moore has promised to prepare his for the Journal also.

Dr. F. F. Farnsworth read a very interesting paper on "State Problems." In this paper he calls attention to many health problems, taxation ete., but made his main argument on the necessity of controlling the great danger and loss from venereal disease. I am sendiing this paper to the Journal in which paper there is much for careful thought. Dr. Farnsworth's paper was eommented upon and commended by Drs. Irons, Miller and Talbott and discussion elosed by Dr. Farnsworth.

Dr. McIntosh read a well prepared paper on Pterygrum, History, Etiology and Treatment.

Dr. Irons read a paper "How to make the Medical Society Helpful." In this paper Dr. Irons insists that the only praetieal way to reeeive benefits is to take an active part in soeiety work.

A motion was adopted unanimously reeommending Dr. Farnsworth for State Commissioner of Health, if there should be a vaeaney, believing him to be the

best qualified man in the state at this time for the work of that office.

A unanimous vote of thanks was given Dr. Farnsworth for his visit and paper. Dr. Farnsworth spent a very busy day with us addressing the High School, D. & E. College, Rotary Club, Medical Society and mass meeting at night.

On invitation of Dr. Miller the July meeting of the society will be held in Tucker County. Place to be selected by local members.

J. G. Irons,
Secretary.

Dartmoor, W. Va. July 15, 1921

Editor of the Journal:

The B. R. T. Med. Society met in Hotel Imperial Thomas, W. Va. July 13, 1921. at 4:30 P. M. The following physicians were present; Drs. Miller, Moore, E. F. Bosworth, A. S. Pierce, Perry, Butt Irons, Watson, Hamilton, Roth, Bottom, McLean, members and Drs. Thompson, Logan and Girrard visiting.

Dr. Perry presided. The minutes and business of the society were attended to promptly so as to save time on the program.

Dr. E. F. Moore of Davis read a very interesting paper, "Thirty years of Obstetrics," giving his experiences and conclusions. I am sending the paper to the Journal for our readers.

Dr. C. E. Watson of Coketon read a very good paper on "Physical Diagnosis." Doctor feels that physicians are often careless in careful diagnosis and often make needless mistakes in treatmennt by reason of want of easily acquired knowledge.

Dr. H. H. Bottom read a well prepared paper on "Some uses of Pituitrin." This paper is to be sent to the Journal with all of the other papers read and they give much information for the consideration, especially of obstetricians.

Dr. E. R. Logan read a very carefully prepared paper on "Nephrititis." A Clinical Classification and Report of of Cases. The Doctor gave very practical suggestions as to the management and treatment of what is often a most trying problem to the physician.

Dr. Miller is always a thoughtful host and gave the physicians in attendance a most appreciated lunch at the Hotel Imperial for which he has the unbounded thanks of the members.

We did not have time for full discussion of the papers but we all feel we had an excellent meeting, receiving many pointers for our guidance.

The October meeting wil be in Elkins when we hope to have representations from Lawyers, Druggists and Dentists to give us papers.

J. G. Irons
Secretary.

Bluefield, W. Va.,
June 30, 1921.

The Mercer County Medical Society held its regular monthly meeting in the room of the Chamber of Commerce, and was called to order by Dr. Slusher at 8:30 p. m.

The minutes of the April meeting were read by the Secretary and approved by the society.

Under clinical cases Dr. C. T. St. Clair read us an interesting and instructive paper on "Deviation of the Nasal Septum" and described the operation of same; also mentioned a case of perforation of the nasal septum. In describing the above operation he spoke of applying cocaine crystals to the mucous membrane to produce anaesthesia, then later on a

weak solution was injected into the membrane. This paper was discussed by Dr. Peery and closed by Dr. C. T. St. Clair.

Dr. Peery reported a very unusual malignant growth of the eye-ball, probably a sarcoma of the cornea. The eye-ball, was enucliated by Dr. Peery and radiated by Dr. R. O. Rogers, at the Bluefield Sanitarium, and at the time of this report the patient was doing nicely, at twelve months after the operation, where heretofore such patients always died within three months after operation. This case was discussed by Drs. Rogers and C. T. St. Clair.

On account of but one member of the board of censors being present the application of Drs. Easley and Warlick were not voted on.

The present Bluefield water supply was discussed pro and con by Drs. Fox Hare and others.

Dr. Charles F. Hicks, who has recently joined in with the firm of Drs. Fox, St. Clair & Rogers, at the Bluefield Sanitarium, was given a warm reception by the society. Dr. Hicks responded by saying he would soon obtain his demit from the McDowell County Medical Society and then present it to this society for action.

Dr. Reynolds, of the Bluefield Sanitarium, was also a visitor and when called upon made us a very nice speech and said after securing reciprocity with West Virginia he hoped to present his application to this society for membership.

Dr. Steele was appointed by the chair to go with Mr. Fuqua to Dr. Thompson's home and see if the remaining society belongings could be found, such as stationery, society seal, etc.

The Foland Printing Co. bill of May 25, 1921, for $4.50, June 27, 1921, for $4.50, and Mercer Healing Springs Hotel bill of August 21, 1920, for 34.00, were allowed and ordered paid.

Twelve members and two visitors were present.

It was decided by the society that we hold our annual picnic at Glenwood Park at our next regular meeting time in July, and the following members were appointed by the president as the entertaining committee for that occasion: Drs. Hare, Wallingford, and Uriah Vermillion.

The August program was read as follows:

Dr. J. O. Bailiff
Dr. Ira Smith
Dr. B. W. Steele
Dr. J. H. Bird
Dr. E. M. Tanner

The subject of hospital clinics was discussed without any definite action

Adjourned at 10:00 p. m.

H. G. STEELE,
Secretary

MERCER COUNTY MEDICAL SOCIETY ANNUAL OUTING

Glenwood Park, W .Va.
on
Bluefield-Princeton Road,
July 21, 1921.

Thursday afternoon about eighty doctors, their families, friends and guests, met at Glenwood Park on the annual picnic outing of the Mercer County Medical Society, and from noon until dusk the busy servants of humanity put aside their cares and worries and just enjoyed themselves. They began to gather at the park at 11:30 o'clock Thursday morning, almost all bringing a heavily laden basket of good things

to eat, and, after a temporary table had been prepared and the eatables placed on it there was a veritable mountain of food awaiting the attack of the picnickers They attacked, and fried chicken, watermelon, delicious cakes and lemonade went the route all well-cooked foods should go.

Ready for any ordeal after such an excellent dinner, the doctors and their friends grouped together and were "shot" by Photographer Atkins about two o'clock and then, a half hour later President W. C. Slusher called the society together under the shade of a huge maple tree and the doctors sat down for a regular business meeting in an unusual place.

The secretary read the minutes of the June meeting and they were adopted by the society.

The first paper on the program was one by Dr. O. S. Hare, entitled "The Harvest," in which the writer took up the subject of the general handling and treatment of cases of gonorrhoea and added the admonition to the doctors that we give such cases closer and stricter attention than ever before. In the treatment recommended he laid great stress on the use of mercurorchrome (220), the silver salts, permanginate of potash solutions, the vaccines, and emptying the seminal versicles of their contents and the massaging of the prostate gland. In replying to some questions asked he advised injections of mercurochrome (220) in 1% solution, at the same time massaging the urethra, after each voiding of urine, then once or twice a week deep urethral and bladder injections should be made with this strength solution. The treatment should be kept up for weeks and weeks,—yes, months and months. It was a very interesting, very well prepared and most instructive paper. A discussion of it was led by Dr. R. O. Rogers, Dr. W. H. St. Clair and Dr. W. C. Slusher, and the author of the paper was highly complimented on his able handling of the topic.

The next paper was one of unusaul subject and interest—'Insanity, the cause of Religion," prepared and read by Dr. Sam Holroyd, of Spencer, in which he exploded the old fallacy that more people went insane over religion than anything else. He declared the reason so many people of feeble intellects showed marked religious tendencies was that religion was the dominant and all-powerful thought in their weak minds, and consequently they expressed themselves more frequently and more freely on this than on any othr subject. In the discussion which followed the conclusion of the paper Dr. J. B. Kirk, of Bluefield, declared that Christianity should tend to make less people insane rather than more. Dr. W. I. Gautier, of Athens, pointed out the fact that people sometimes go insane over particular things, using the illustration of a farmer he knew who went insane on the subject of oak trees. He pointed out that as religion is the greatest thought in the minds of most people it was not at all surprising that many people should become unbalanced on that subject, also.

Dr. D. H. Thornton, of Princeton, declared the mind has thirty or more faculties and in crazy people the spiritual force was greater than the physical. Dr. O. S. Hare, of Bluefield, said most all crazy folks he had come in contact with had been "hooked up" more or less with some form of religion.

In closing the paper, Dr. Holroyd declared empathically religion has nothing to do at all with the psychology of the brain. Religion didn't make any-

body crazy, but being the greatest thing they thought of often constituted the larger part of their delusion. People might go crazy over politics, but people do not think of politics seriously and with such intense interest, so they don't go crazy over it.

The members present were W. C. Slusher, O. S. Hare, J. E. Martin, W. H. St. Clair, J. B. Kirk, R. O. Rogers, H. G. Steele, S. J. Kell, all of Bluefield; Uriah Vermillion and I. W. Gautier, of Athens; Ira Smith, J. R. Vermillion, B. W. Bird, W. H. Wallingford, C. C. Peters, H. C. Hays, and D. H. Thornton, of Princeton; J. H. Bird, of Rock; Sam Holroyd, of Spencer; F. F. Holdroyd, of Glen Rogers;Dr. B. W. Fitzhugh, of McComas; and Dr. B. P. Ratcliff, of Graham. In addition there were several visitors, including Dr. Reynolds, Bluefield Sanitarium, and Dr. P. J. McElrath, from Bramwell.

The Foland Printing Company bill of July 18, 1921 for 125 circular letters $6.25, was allowed and ordered paid by the president.

September program was read, as follows:

Dr. F. F. Holroyd
Dr. J. E. Martin
Dr. W. W. Morton
Dr. C. C. Peters
Dr. W. D. Fitzhugh

The society adjourned at 4 p. m.

H. G. STEELE,
Secretary.

March 25, 1921.

Editor, W. Va. Medical Journal,
Huntington, W. Va.

Dear Doctor:

The Releigh County Medical Society convened in regular session in the Chamber of Commerce, Beckley, W. Va., Monday evening, March 21st, with Dr. E. S. Dupuy, President, in the chair. The following members were present; Drs. E. S. Dupuy, C. S. Smith, J. E. Coleman, U. G. Cook, D. B. & K. M. Jarrell, F. H. Sisler, Robert Wristen, B. B. Richmond and A. H. Grigg.

The following papers were read and thoroughly enjoyed by the members present. "Pneumonia with interesting Complications" by Dr. U. G. Cook. 'Acute Entero-Colitis" by Dr. K. M. Jarrell and "The Sympathic Nervous System" by Dr. A. H. Grigg. Each of these men read real-genuine good papers, and the enthuiasm displayed at this meeting was appreciated—not a single member present failed to join in the various discussions and we feel that the March meeting was one of the very best in the history of the society.

A resolution was made and adopted that all members who failed to pay their 1921 dues by April 1st, will be automatically dropped and be required to pay $8.00 annual dues instead of $7.00 upon their reinstatment.

Dr. M. C. Banks of Raleigh was appointed a member of the American Legion Building Campaign—representing the Medical fraternity. There are many physicians in Raleigh County interested in the American Legion Memorial Building.

By a unamious vote the society decided in favor of having a 'Medical and Surgical Clinic' in Beckley on May 9th. We will have clinics on Surgery, Medicine, Pedriatrics, G. U., Eye, Ear, Nose and Throat. These clinics will commence at 1 P. M., and at 8:30 P. M. a banqut will be given at the Beckley Hotel, Dr. J. E. Malaby of Baltimore, Md., who will give a lantern slide demonstration and lecture. The society hopes

to make this a very enjoyable event.

The following members of the society have paid their annual dues for 1921 up-to-and-including March 25th;

Drs. W. C. Covey, I. V. Grissom, J. E. Coleman, F. L. Banks, F. S. Richmond, W. H. Cunningham, A. H. Grigg, F. J. Moore, C. L. Hamilton, G. P. Daniels, F. H. Sisler, A. D. Tyree, B. L. Pettry, George W. Johnson, Chas. S. Smith, R. L. Hunter, A. G. Bowles, E. S. Dupuy, B. W. Eakin, Fred Stansbury, I. M Fisher, E. H. Hedrick, T. F. Garrett, Robert Wristen, U. G. Cook, D. B. Jarrell and K. M. Jarrell.

Dr. A. H. Grigg was appointed by the President to prepare and read a paper before the State Association in Charleston.

The secretary was appointed to draw-up resolutions in regards to the famous Rubin case of Waukegan ,Ill., which was 'cured' by chiropracters. A copy of these resolutions will be presented to our state senator and representatives and every means will be used to prevent the licensing of Chiropractors in this state.

Yours very truly,
CHAS. S. SMITH,
Secretary.

Surgery

EXPLORATORY OPERATION FOR CANCER

The advice given by Doctor Greenough (p. 296) in his excellent article on the control of cancer as to the usefulness of an exploratory operation must not be misunderstood. Doctor Greenough says that such an operation offers the patient his greatest chance of cure. "By this means, a tumor can be explored under direct observation, and, if necessary, a portion of the tissue may be removed *for immediate examination* (italics ours—Ed.) by frozen section under the microscope. In accordance with the facts thus established, the operation can be completed and the patient given his best opportunity for cure."

This advice, it will be observed, does not mean that the microscopical examination of the excised tissue should be defered to a convenient time. It is generally recognized that a cutting operation facilitates extension through the lymph-paths and thus opens the way to metastases. Exploratory excision, as it has been practiced formerly, is now justly condemned by experienced surgeons. The operation may be undertaken only if an examination of the abnormal tissue can be done immediately and if, in case that is positive, the tumor or other lesion can be removed forthwith while the patient is under the anesthetic.—Clinical Medicine May 1921.

SPECIAL SPLINTS

A series of special splints for certain injuries, including a shoulder abduction splint, elbow and knee traction splint, and a forearm supination splint are described and illustrated by E. W. Cleary, San Francisco (*Journal* A. M. A., Nov. 15, 1919). The descriptions are detailed and do not lend themselves to abstracting. The ideas will probably be useful to surgeons, as the appliances were developed in caring for some hundreds of war wounds of the extremities.

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Assistant Editors
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SURGICAL SECTION, W. VA. STATE MEDICAL ASSOCIATION

By A. P. Butt, M. D., F. A. C. S.
Elkins, W. Va.

Chairman's Address. Charleston, May, 25, 1921.

Mr. President and Fellow Members of the W. Va., State Medical Association:— I feel that you have a right to expect of the Chairman of the Surgical Section, if not something new, at least something dressed up to resemble something new. Feeling myself unable to do either I chose to send out a questionaire, the replies thereto will make the bulk of my address.

While some of the respondents are not widely known, many of them stand at the very top and their opinions should be of interest to you.

That the replies reeeeived would differ widely was only to be expected. While I believe along with standardized hospitals, standardized medical colleges, standardized splints, standardized this, that, and the other, an effort will soon come to standardize the surgeon, I think I see a rocky road ahead.

Far be it from me to imply that many good things might not come from surgery being standarized but it would certainly mean a slowing up, if not the end of medical progress.

There may be much to commend in the full-time professor; and such branches as chemistry, physiology and others might well be taught by full-time men but when my boy studies medicine I want his professors of surgery, practice and obstetrics to be bigger men than can be procured by any university on a full time basis. I want him to get his inspiration from a man big enough to command many times the ten thousand which a medical school offers a full time man.

The dollar mark may not be the ideal measure of a man but often, if not usually, it is fairly accurate. Can you imagine a Sims, a Price, a McGuire, a Gross, or a Murphy being either standardized or serving on a full time basis?

Permit me to say that the profession is steadily going up. We have higher ideals, more tolerance, more broad mindedness than formerly.

Nevertheles there are, and always will be, evils to combat. Among these I would mention the subject of malpractice suits, these are becoming increasingly frequent and must give us much concern.

A layman would naturally infer that only the upstart, the pretender, the physician with little mental equipment would be in danger; that the competent, conscientious surgeon need have no fear.

Alas that such is not the case.

A glance at the names of those who have been held up convinces us that our best men are suffering more than those not so well known.

If it be a fact that ability and devotion to our profession are of no avail, what defense have we? If there is no other way perhaps the very intensity of the disease may produce a toxin strong enough to kill the germ. Within the last few days I knew of a man going to four doctors before he could get one to undertake the treatment of his factured arm. At least two of these were deterred by fear of damage suits.

Ninety percent of these suits are a sort of legalized hold up pure and simple. The morals of the plaintiff and his low class lawyers differ in no way, save in the lack of personal courage, from those of the man who holds up a bank. The one steals in a round about way, the other goes bravely and directly to the point.

Unfortunately I have little to offer you in the way of a remedy but let us not forget that nearly every suit has its inception in the careless or malicious remark of some of our profession.

If malicious, the erring one belongs with Judas Iscariot, let us publicly brand him. He should have no part nor parcel with us. An Ishmaelite let him be.

As to the careless, if any such be present, may I ask upon what meat you feed that you become infallible; that you dare criticise the work of another, especially when the conditions under which he worked are to you unknown. Can you truthfully affirm that you have ever seen in the practice of another a worse result than some you have had yourself?

You may not have had exactly the same misfortune your brother had, but I am sure you have had something equally as bad.

Let me impress upon you the fact that criticism of a brother physician is often unjust, always unwise and decidedly out of date. If wisdom and justice do not appeal to you perhaps the last reason may. The modern business and professional man stopped knocking some time ago.

May I ask that each of you whenever you hear of a suit, or threatened suit, ask at once "What doctor did this"? If his guilt is clearly fixed give him a chance to get right, to come clean. If he refuses pass the word along that Dr. Blank was responsible in order that he may be held up to the merited scorn of his brethern.

Some of our members have erred simply from their innate sense of right; some have erred from carelessness and lack of education along this line; some (an exceedingly small number I am sure) have sinned because they were inherently crooked. Let us drive this last class in (or out) with the bull hide if necessary.

I predict that the day is soon coming when no doctor will knowingly instigate a suit of mal-practice against his brother physician or be seen on the witness stand against him. If I help to hasten this day I shall consider that I have paid my professional debt.

With the conclusion of these remarks I shall take up the results of my questionnaire.

QUESTION ONE

What have been the most marked advances in surgery during the past few years, and which of the newer methods of procedure seem to hold out greatest promise of stability?

Babcock, W.

(a) The surgery of the ductless glands opens a new field of great promise but as yet we are only on its threshold.

(b) The tendency to classify malignant tumors into varities and locations in respect to their most efficient treatment and a better appreciation of non-operative treatment. Much remains to be done in this field.

Bloodgood's work in differentiating the various types of so-called sarcomas of long bones as to their prognosis and treatmet is a good example of this advance.

Formerly every sarcoma called for amputation or other radical operation. Now we know that certain lympho-sarcomas are best treated by radiant energy, myelomas by local excission, while for the periosteal sarcomas of long bones amputation mutilates but rarely extirpates.

Much remains to be done in the therapeutics of malignant growths, and as with sarcoma, the term, carcinoma includes a number of varities which differ greatly in their susceptibility to various therapeutic agents.

Contrast, for example, the basal celled, the prickly celled epithelioma and the melanoma and how radium seems more efficient than operative proceedures for epithelioma of the cervix and less efficient for epithelioma of the rectum.

(c) Sutstitution of accurate and untraumatising operative procedures for the brutal force and speed of a few years back.

BARKER

The Carrell-Dakin method of treating wounds, the active method of treating knee joint infections, the changed ideas regarding empyema, the improvement in lung surgery, the injection of the ventricles of the brain with air as a guide to the localization of brain tumors, the study of the bile by the Meltzer method as a precedent to surgical operation on the biliary passages, the radium treatment of lymphosarcomatous growths in the naso-pharynx.

BINNIE

Rediscovery of the Thomas splint, the excission of contaminated wounds, the Willems treatment of joint injuries by motion.

BLOODGOOD

a. Carrell-Dakin treatment of open wounds.

b. X-ray method of diagnosis.

c. Hospital Standardization.

d. Follow-up system for checking of operative results.

e. Radium and X-ray therapy.

DOWNES

The recent improvement in the treatment of empyema stands out very prominently as does thoracic surgery in general.

EARDMAN

Surgery of the lungs and joints.

FINNEY

This a very broad question and difficult to answer since there has been no very outstanding advance in surgery for the past few years.

Perhaps the most far-reaching is the Carrell-Dakin method of treating wounds.

Willems' active treament of infected joints.

Treatment of amputation stumps.

KENNEDY

Surgery of the pituitary body has been one of the latest surgical problems. There has been no advance in surgery of the lower abdomen, surgery of the upper abdomen holds the interest of the abdominal surgeon.

There has been greater interest to recognize early ulcer of the stomach and duodenum.

I have not been able to attribute the major surgery of the chest to the war.

LEWIS, BRANSFORD.

The newer non-operative treatments of bladder disease.

a. Cystoscopic fulguration.
b. Radium.
c. Deep X-ray therapy.

MARTIN, EDWARD.

Gentleness in handling both patient and tissues, common sense and the human touch; regional anesthesia.

MCGUIRE.

Thyroid and gastric work.

OCHSNER.

Resconstruction work and correction of deformities in war and industrial injuries.

PARHAM.

Treatment of wounds in general by de'bridement and Carrell-Dakin method, primary and secondary closure. Treatment of chest injuries, joint injuries, conspicuously that of Willems.

POLAK.

The greatest has been in adopting the two and three stage operation for cancer of the intestine.

SOUCHON.

Abdominal surgery.

TAYLOR, TUNSTALL.

Dakin solution, W. H. Taylor's Tidal Irrigation of hypertonic salt solution for infected wounds and sinuses.

Willems' treatment for non-fixation in infected joints; use of Balkan frame.

VAUGHN, TULLY.

Early diagnosis and operation for appendicitis, cholecystitis, ulcer of stomach and duodenum, cancer, fractures of long bones.

QUESTION TWO

Some of the things that have gone into the discard or seem to be falling into "innocuous desuetude"?

BABCOCK.

Among things that have been, or should be, discarded are the pulmoter, the Lane plate for many fractures, the Murphy button and other mechanical aids for intestinal suture, the so-called high enemas, drainage in the early stage of peritonities from appendicitis, many of the operations for viceroptosis. Many of the cauterization operations in rhinology, excision or local cauterization for anthrax, curettage as the routine treatment for sterility, septic endometritis and dysmenorrhoea; the resection of veins for varicocele and Dakin's solution for wet dressing. If we could cast out all the old fracture appliances and become skilled in the use of the seven army

splints, mal-union after fractures would be less common.

BARKER.

The wholesale slaughter of the uninfected tonsil, the same of the ovary, the Lane operation on the colon, the C. D. Reid operation for epilepsy.

BLOODGOOD.

I know of no important things that have been discarded.

DOWNES.

Murphy button, short circuiting and other operations for viceroptosis.

EARDMAN.

Pre-operative preparation of patients. Use of bichloride.

KENNEDEY.

The fixation operations for intra-abdominal organs in general have lost in popularity. The curet has been discarded by many thinking gynecologists. Lane's removal of the colon, the radical Wertheim operation.

LEWIS.

The various forms of urine segregators. Perineal prostatectomy.

MARTIN.

Strychina for shock; cumbersome dressings.

MCGUIRE.

Removal of normal organs like the big bowel, fixation of moveable organs like the uterus and kidney.

MORRIS.

Various antiseptics which are injurious to the normal cells. The idea that we must remove all pus in cases in which the mere fact of suppuration has called out such a high degree of protection that the pus is not in itself very harmful provided we give it free exit.

OCHSNER.

Unecessary gynecological and abdominal operations.

SOUCHON.

"I would not like to go so far as to put myself on record as holding that transfusion should be discarded, however I cannot see as regards my own work and that of my associates that there is any encouragement for the use of transfusion as a substitute for infusion.

STEWART.

Carrell- Dakin treatment.

TAYLOR.

Beck's bismuth paste, Bier's hyperemia, use of animal membranes in mobilizing joints.

VAUGHAN

Fowler position, Murphy drip, Carrell-Dakin, indiscriminate operations on fractures.

QUESTION THREE

Your opinion of: Fowler position, Murphy drip, Carrell-Dakin?

BABCOCK

The Fowler position I consider useful, the Murphy drip of value, but it is not successful in the hands of the average nurse making it frequently necessary to substitute repeated ememas containing definite quantities of liquid.

The Carrell-Dakin treatment is too elaborate and has too much detail for the average surgeon, and unless used with great skill does not compete with the old methods of wound treatment. It should at once be discarded by the surgeon of average facilities.

BARKER

Murphy treatment and Carrell-Dakin very valuable.

BLOODGOOD

Still use Fowler position in certain cases of peritonitis, but especially in older people to avoid post-pneumonia.

Murphy drip in my clinic is a routine after all operations. Carrell-Dakin valuable.

CABOT

Fowler position of definite value in abdominal infections below the umbilicus. The Murphy drip I use considerably in patients who need water beyond what they can take by the mouth. Carrell-Dakin method I believe to be of distinct value in cleaning up septic wounds. I use it regularly in the treatment of osteomyelitis and in sterilizing cavities of chronic empyema.

DOWNES

Fowler position of great value, also Murphy drip and Carrell-Dakin.

EARDMAN

All useful.

FINNEY

I have always thought well of the Fowler position, very well of the Murphy drip and am enthusiastic over Carrell-Dakin when properly applied. It all depends on that.

GARDNER

I put every case operated upon for any abdominal condition in the Fowler position immediately after operation. Less abdominal distention, less discomfort. I use plain water Murphy drip on all of them to supply water until such time as it can be taken freely by mouth.

KENNEDY

Never use Fowler position, wrong from standpoint of heart protection, has little or nothing to do with extension of peritonitis. The pelvis will hold six inches of filth while in Fowler Position. The patient on the right side, knees flexed, is the position of flexion and rest, the very best position for the peritonitic patient. The Murphy drip may be helpful but do not permit it to do your surgery. I do not believe the drip has saved a life for me. Do not let it be a conscience appeaser. The Carrell-Dakin solution is a good antiseptic but it is my opinion that many of the good results are gotten on account of the radical drainage necessary to carry out the method.

LEWIS

Murphy Drip, Carrell-Dakin, both excellent.

MARTIN

All good.

MCGLANNAN

All useful.

MCGUIRE

Murphy drip and Fowler position life saving measures. I have not had sufficient experience with Carrell-Dakin solution to justify an opinion of its value, but I doubt whether its use in inexperienced hands is warranted.

MORRIS

Fowler position has advantages in a certain group of cases although some surgeons who employed it extensively no longer find it essential Murphy drip has come to stay. So has Carrell-Dakin. Any question about the value of the latter related only an incomplete understading of details.

OCHSNER

All have come to stay.

PARHAM

I still use with satisfaction the Murphy-Fowler method. Am a firm believer in Carrell-Dakin method when carried out efficiently.

PILCHER

Each valuable in its special field. Permanent additions to surgical resource.

POLAK

We use the Fowler position and a modification of the Murphy drip as routine, and feel sure that the elevated trunk posture favors isolation of the pelvis.

The Carrell-Dakin treatment has no place in gynecology or obstetrics, and I make this statment after a very thorough use of it.

SOUCHON

Fowler position illogical; Murphy drip questionable; Carrell-Dakin not practical.

STEWART

Murphy drip, Fowler position good. Carrell-Dakin useless.

TAYLOR

All useful.

VAUGHN

All useless.

QUESTION FOUR

What, if anything, did the war bring us?

Babcock. a. Thanks to Cushing, a greatly improved method of treating gunshot wounds of the brain.

b. The establishment of debridement and primary suture as the best treatment for many lacerated wounds.

c. Impressive evidence as to the prophylatic value of immediate injections of tetanic serum.

d. The great value of Willem's mobilization treatment for forms of purulent arthritis.

e. The establishment of many details of great importance in amputations. Traction upon the stump and stump exercise may be mentioned.

f. The control of gas bacillus infection without amputation.

g. A standard tecnique for the treatment of peripheral nerve injuries.

h. The development of certain forms of plastic surgery such as rhinoplasty, grafting for loss of body of the mandible, and especially mucous membrane inlay grafting upon dental molding compound.

Many of the things that should be absolutely settled by the tremendous experience of the great war will be forgotten, however, unless the profession takes care to clearly and firmly fix the standards which may now be established.

Barker. Better treatment of wounds; more appreciation of necessity of good organization; importance of group diagnosis.

Bloodgood. a. Carrell-Dakin treatment of open wounds.

b. Treatment of fractures by splints such as Thomas and overhead swinging, rather than plaster.

c. Amputations, especially that is unnecessary to save muscle to cover bone.

d. Tremendous experience of surgery of the chest and wounds of the head.

e. Prevention of communicable diseases, except respiratory. Flue.

f. Formulation of methods of attack on venereal disease.

g. The importance of dentistry as a department of medicine.

Cabot. The most important contribution of the war was to increase our knowledge of the methods of dealing with compound fractures, particularly in regard to the possibility of cleaning up the bad ones by relatively extensive operation and converting them at once into simple fractures.

b. The Carrell-Dakin treatment.

c. Increase in our knowledge of plastic surgery, particularly the use of the tube graft as elaborated by Gillis.

d. Greater boldness and safety in dealing with wounds of the lung.

Downes. The value of personal care of infected wounds and fractures.

Eardman. Income tax aplenty.

Finney. Carrell-Dakin, orthopoedic maxilo-facial advances of various kinds, blood transfusion simplified, the extended use of the Thomas splint.

Martin. Larger bacterial knowledge, and a fuller concept of the value of living tissues to resist infection if given a fair show; treatment of fractures, particularly that of the femur; a concept of team work on the part of the amputator and the fitter of artificial limbs.

McGlannan. Disinfection and secondary suture.

McGuire. Thoracic work.

Morris. The war brought us few if any new principles, but it fixed definitely the value of many which were in dispute. Wide application of Carrell-Dakin method being one of these.

b. Drainage in injuries of the knee joint, mobility.

Ochsner. Prophylaxis against tetanus; removal of infected tissues that have been destroyed by metalic objects; secondary suture of infected wounds; late operation for empyema.

Taylor. The great importance of splinting fractures at the front line, appreciable lessening mortality.

Vaughn. The proper use of the Thomas splint, how not to amputate limbs, how little we know of how to treat pyothorax, wounds of the brain and peripheral nerves.

QUESTION FIVE

Do you believe carcinoma to be on the increase?

Babcock. No. but the profession has become much more proficient in the recognition of carcinoma.

Barker. The disease is certainly more often recognized than formerly but whether on the increase or not I do not know.

Bloodgood. We have no definite facts that can absolutely be depended upon.

Cabot. I doubt it.

Downes. Yes

Eardman. No.

Finney. Yes.

Gardner. I doubt very much if there is an actual increase in carcinoma. We talk more about it and see a few more, but that does not mean there are more of them.

Kennedy. Carcinoma in my personal experience is on the increase but many better teachers say it is due to earlier and more uniform recognition.

Lewis. Yes.

Martin, Yes.

McGlannan. Yes.

MsGuire. I do not believe cancer is on the increase but think the larger number of cases reported is due to increased longevity and more accurate diagnosis.

Morris. Carcinoma is certainly on the increase if we can judge from statistics from institutions which did not overlook carcinoma before the question came up as to whether it was not being discovered more frequentlp because of greater attention.

Ochsner. Yes.

Parham. It would appear from statistics that carcinoma is on the inerease but this may be due to other factors.

Pilcher. Possible but not certain.

Polak. There is no doubt that cancer is on the increase, and our only hope for

improving the statistics is by publicity which will lead to an earlier diagnosis.

Souchon. Yes.

Stewart. No.

Vaughn. It is doubtful. Everyone is looking for it and many warts, moles, chronic ulcers and cases of leucoplacia are called cancers when they are not.

QUESTION SIX

Has anything other than publicity been accomplished towards prevention or cure?

Babcock. Yes the education of the public drives the profession to earlier and more careful consideration of the disease.

a. It has been established that very early operation positively eradicates many carcinomas.

More efficient operative measures here-to-fore often left to itinerants including chemical, electrical, and thermic measures, is being appreciated by the profession.

Radiation is gradually finding its place as a therapeutic measure.

Barker. Better diagnosis and earlier interference have increased cures.

Bloodgood. Radium and X-ray as the therapeutic agents have been greatly developed.

Cabot. No.

Downes. Yes.

Eardman. Not to my knowledge.

Finney. Not much except in the case of earlier operation.

Kennedy. I doubt much if anything of real value has been brought forward in the last quarter of a century for carcinoma. Skin cancers and superficial growths seem to yield to radium and X-ray but even here we are still in doubt as to the final outcome.

Lewis Yes. Newer non-operative methods.

(a) Cystoscopic fulguration.

(b) Radium

(c) Deep X-ray.

Martin. Yes.

McGlannan. Earlier operation.

McGuire. I don't think much has been accomplished in preventing or curing cancer except the education of the public to seek early operation.

Morris. Radium, X-ray.

Ochsner. Surgeons have become more thorough in their operations, physicians more prompt in diagnosis.

Pilcher. Yes.

Souchon. NO.

Stewart. No.

Vaughn. Answer implies doubt.

QUESTION SEVEN

Are operative proceedures more valuable today than formerly? This question was misunderstood by some. I should have said operative procedures for carcinoma.

Babcock. Yes, because performed with a better techinque and with a better physiologic and pathologic basic knowledge, so that operations are more scientific than ever before. Unfortunately in comparing the mortality in various hospitals it is evident that many surgeons are obtaining results far inferior to others. This applies to surgeons of large reputations as well as those little known, and is apparently due to neglect in diagnosis, of the factors of safety, and carelessness in an effort to gain speed or conserve time. Morbidy after operations is being considered but yet looms unduly large. Fortunately gastro-enterostomy

is no longer routinely advised for severe gastric symptoms, ophorectomy or appendectony for lower abdominal pain or plastic and suspension operations for pelvic distress in women.

Barker. Yes, beause better done.

Bloodgood. All operative procedures are more valuable today than formerly because through the education of the public and profession they are instituted for relief of disease at an earlier period.

Cabot. No.

Downes. Yes in properly selected cases.

Eardman. Without question.

Finney. Yes, because earlier and more intelligently applied.

Gardner. I think they are. The patients are seen earlier and the dissection is wider.

Kennedy. If the profession will do vaginal hysterectomies with clamps eighty percent of the women who now die from uterine cancer, can be saved.

The operation is easy, quick, practically no mortality. This statement is based on over three thousand vaginal hysterectomies.

Lewis. Yes.

Martin. Yes.

McGlannan. Yes.

McGuire. I think the operative treatment of cancer is more effective today than formerly because cases are operated on earlier and given pre and post operative treatment with radium and X-ray

Pilcher. Yes, immensely.

Polak. Radical operative procedures have not given the expected results in uterine cancer.

Souchon. Yes.

Stewart. Yes, a little more complete.

Taylor. Yes.

Vaughn. Yes.

QUESTION EIGHT

Do you know of a single three year cure of inoperable carcinoma by radium?

Babcock. I know of a number of cases in which by radium or X-ray treatment patients have lived from three to nine years with in-operable carcinoma, probably not cured but with the fatal termination deferred.

Barker. No.

Downes. Yes.

Finney. No except in cases of superfical varity.

Gardner. No. Every inoperable carcinoma that I have any personal knowledge of is dead.

Kennedy. I do not.

Martin. Yes.

McGlannan. No.

McGuire. I do not personally know of a three year cure of carcinoma by radium.

Morris. I know of one case, my own patient, Carcinoma of uterus. I considered this inoperable when there was a recurrence after my third operation. Radium then caused a disappearance of the malignant disease for eight years.

In a case of carcinoma of the rectum involving the bladder wall and considered inoperable from the first radium has caused disappearance of the neoplasm, about six years have now elapsed. In a case of carcinoma of the penis which I considered inoperable after the third removal of areas of gland involvement the patient has now been well for five years as a result of X-ray treatment.

I have many other cases in which the disease has at least been kept in check.

Ochsner. Yes. My colleague, Dr. Henry Schmitz, who has treated my inoperable carcinomas has a number of these.

Parham. I can not answer in the affirmative.

Pilcher. No.

Polak. Radium heals cancerous ulcerations and for a time stops the growths. I do not know of any positive cure in inopreable cancer.

Souchon. No.

Stewart. No, I have buried many.

Vaughn. No.

QUESTION NINE AND TEN

How soon after diagnosis does ulcer of the stomach become purely surgical? ulcer of duodenum?

Babcock. a. When there is no improvement or repeated relapses after thorough or repeated trials of a recognized treatment, such as that of Sippey.

b. When there is evidence of partial or complete perforation, obstruction or malignant degeneration.

Same for duodenum.

Barker. When it leads to obstruction or pain and bleeding do not yield to medical measures. Same for duodenum.

Cabot. When it is satisfactorily demonstrated that the ulcer will not heal and stay healed under non-operative treatment. Same for ulcer of duodenum.

Downes. Surgical from the start.

Ulcer of duodenum should receive proper medical care and diet for a reasonable length of time provided the social status of the patient will permit of these measures being carried out as they should be.

Eardman. When demonstrable by X-ray.

Duodenum. After a legitimate period of treatment unless X-ray shows evidence to the contrary.

Finney. Immediately for both.

Kennedy. Most chronic ulcers of stomach are surgical.

Ulcers of duodenum should be given a longer period of treatment as they are less liable to become malignant.

Martin. To both, we do not know.

McGlannan. No time limit can be set.

McGuire. As soon as definite diagnosis is made in stomach ulcer. Ulcer of duodenum should only be operated when proper medical treatment has been tried and failed.

Morris. Ulcer of stomach becomes purely surgical when medical resources properly applied fail to keep the case under cotrol. The same is true of ulcer of duodenum.

Ochsner. As soon as it causes sufficient amount of obstruction to cause dilatation of the stomach. I believe that 90% of all early ulcers can be cured without operation if treatment is thoroughly carried out for a long period of time. Same is true of ulcers of duodenum.

Parham. As soon as it becomes apparant that careful, scientific medical treatment has failed to bring about marked improvement.

Stewart. As soon as diagnosis is certain in ulcer of stomach. In ulcer of duodenum as soon as rational medical treatment has failed.

Vaughn. Immediately.

QUESTION ELEVEN

What is your opinion of group medicine?

Babcock. Conducted by men of the highest type it has much to commend it; carried out by men of average ability there is much to be criticised.

It emphasizes symptoms and specialties rather than the patient as a whole;

it exacts higher fees for more impersonal service; overdoes consultation practice; invites dependence and laziness as to diagnosis outside the particular field of each member of the group; increases our business sense and decreases our personal responsibility and our humanitarian interest in medicine.

It limits and overrates the field of the mediocre man, raises him to the rank of a specialist and enables him to demand undeserved tribute from the patient. It brings some of the evils of trades unionism into our profession, unless guided by a very broad and sane man, it distorts the medical perspective and often tends to magnify an unimportant ailment. For peace and profit members of the group are often driven to commend each other to patients they know would be better served outside the group.

Barker. Very favorable when properly conducted.

Bloodgood. It is a natural evolution and is bound to come.

Cabot. I have no doubt that group medicine in some form is permanent. I doubt whether any particular plan of organization is widely suited to many localities and therefore believe that local conditions will influence the type of organization. As at present practiced, group medicine is most certainly of more benefit to the physicians in enabling them to correlate their work, to save time and to organize their bookeeping than to the patient. It is most important that the medical group should bear in mind that this method must not only be of diagnostic but of financial benefit to the patient before it will achieve its proper position.

Downes. I approve of it provided the men at the head are of the right sort.

Finney. Great possibilities for good and also for evil. It depends on how well and how conscientiously it is done.

Gardner. Group medicine works well when dealing with patients whose disease is not obvious and in that class that drift from one doctor to another.

I do not see how it can take the place of the general practitioner. Good for the chronic ambulant patient, but useless for the man with a night attack of belly-ache.

Kennedy. Group medicine is a double edged sword. It will take much of the soul out of medicine. From my experience diagnosis from groups of specialists has been a failure.

We must not take responsibility and purpose from the physician. With loss of individuality will go the spur which makes him the strong man in his community

McGlannan. Valuable if properly overseen.

McGuire. I think group medicine is a good thing for both doctor and the patient and believe eventually it will be almost universally adopted wherever the population is sufficient to support a number of physicians.

Morris. Group medicine is the medicine of the day.

Ochsner. Group medicine is valuable to members and will continue to be so as long as the men who can make a diagnosis because of their broad knowledge continue to be a part of these groups. As soon as these men are eliminated, group medicine is bound to be replaced by individual practice because the groups will be composed of men who are not doctors.

Parham. I think the tendency is towards the organization of diagnostic clinics where the various phases of a case may be taken up more efficiently

by men especially competent to do the work. No one doctor is capable of doing all the work for a complete diagnosis.

Pilcher. A great and important thing.

Polak. Group medicine has not made great strides in the East, as yet. All of our hospital work is done on the group basis.

It is excellent provided there is some one in the group with sufficient clinical experience to summarize and interpret the signficance of the findings.

Souchon. Am organizing one now. Believe in it.

Stewart. Already overdone.

Vaughn. Well in its place but can be overdone.

QUESTION TWELVE

Your opinion of state medicine. Is it to be feared?

Babcock. Yes. We should study how to guide it rather than devoting all our energies to fighting it.

Barker. Will probably come ultimately, but should be premitted to come only as needed and the development should be directed by the medical profession.

Bloodgood. The Public Health Department is the begining of State Medicine. If the medical profession is properly educated and our hospitals are standardized and group medicine is developed there should be no fear that the State will take up the practice of medicine.

Cabot. I do not fear State medicine as I believe that the common sense of the American people will recognize its unsoundness.

Downes. Disapprove of it.

Eardman. No.

Finney. To be avoided and feared.

Gardner. State medicine is a form of socialism that will reduce the efficiency of the medical profession as unionism has reduced the efficiency of the skilled worker.

Kennedy. The profession must run the profession. We must keep out of politics or dictate the politics.

McGlannan. Yes.

McGuire. I believe state medicine is to be feared but I believe it can be avoided if proper measures are followed.

Morris. State medicine is to be feared because of its socialistic tendencies, danger of its passing in the hands of the political group and because of removal of incentive to expert personal advance.

Ochsner. State medicine in its present form is impossible but a form of state medicine is bound to come at some future time.

Pilcher. No.

Souchon. Not to be feared.

Stewart. Yes, is worse than prohibition.

Taylor. We have not been made apprehensive about state medicine.

Vaughn. Promises much for the future. May be long hence. Not to be feared.

QUESTION THIRTEEN

Is there any present need of Gynecology as a speciality?

Babcock. As a research, yes, as a specialty apart from abdominal surgery, no.

Barker. Advantageous to have some abdominal surgeons who are especially fitted to do pelvic work.

Bloodgood. Gynecology is just as distant a speciality in surgery as is urology or orthopoedic surgery. It is

possible in some localities to combine two specialties in surgery.

Cabot. No, except as an adjunct to obstetrics in enabling medical schools to keep that department upon a high plane.

Downes. No.

Eardman. No. All gnecological operators should be surgeons first.

Finney. Yes, just the same as for any other specialty.

Gardner. There is just as much need of gynecolgy as a specialty as there ever was. The same question might be asked in reference to any of the surgical specialties such as brain surgery, genito-urinary surgery, nose and throat and and all others. Most surgeons who do all of them do them all about equally badly.

Kennedy. There was never greater need that at present for the specialty of gynecology.The general surgeon always does his poorest work in gynecology.

The lesions of the female pelvis are a surgical world in themselves and we know little even today as of the physiology of the female organs.

McGlannan. As a refinement in diagnosis and treatment.

McGuire. No. Gynecologists have done much for surgery in the past but their day is done.

Morris. No.

Ochsner. No.

Parham. I do not think we are yet in a position to say that gynecology as a specialty should be discontinued.

Pilcher. No.

Polak. Of course, from my point of view, gynecology is just as distinct from general surgery as eye surgery. We believe that the gynecologist should have a training in obstetric pathology-abdominal surgery and gynecological pathology.

Souchon. No.

Taylor. I think the so-called general surgeon and gynecologist are close together, both being primarily abdominal surgeons.

Vaughn. No.

QUESTION FOURTEEN

How long should the physician remain in general practice before attempting to become a surgeon?

Babcock. During the first four to six years of post graduate surgical training an associated general practice is of great value.

Barker. Long enough to become acquainted with the importance of a general diagnostic survey.

Bloodgood. In my opinion the sooner one begins training as a surgeon the better. The natural training of a surgeon is; a first class medical school; one or two years as interne with rotation service; then one or two years as surgical interne; then if possible an association with a distinguished surgeon. If one is in general practic and desires to take up surgery the sooner the bettr. If possible he should get an internship in a hospital first. When we develop our post graduate schools of medicine and surgery this will be provided for.

Cabot. A broad knowledge of medicine is essential to the production of the best type of surgeon. I think it probable that competent surgeons can be turned out in five years after graduation, of which a reasonable time should be spent in contact with non-surgical conditions.

Downes. I do not think it necessary provided he has had proper hospital training.

Eardman. Some forever.

Finney. I do not think any time need be spent in general practice outside a hospital but every surgeon should have a good service as medical interne before studying surgery.

Kennedy. Five years.

Lewis. Three years.

McGlannan. If hospital training is good no need for general practice.

McGuire. I believe a graduate from a good school after eighteen months to two years work as interne in a general hospital is then qualified to begin his apprenticeship as a surgeon although it would be better if he had five years of general practice before doing so.

Morris. A physician should have as much experience in general practice as he finds it practical to obtain before becoming a surgeon. Three years of general practice after hospital internship would be a minimum.

Ochsner. That depends upon the extent of the practice. If he is active in a great hospital, one, two or three years will sffice. If he sees only the number of cases of general medicine that a good practitioner usually sees in his practice it would take from five to ten years.

Parham. I think the young man should continue in general practice for at least three years, perhaps five before taking up surgery as a specialty.

This time may be materially shortened by service with an active surgeon as his chief.

Pilcher. At least ten years.

Polak. There is no place, at present, for the occasional surgeon or the general practitioner doing his own surgery. The man who professes to be a surgeon should have first; a thorough medical training, then a course in surgical pathology, followed by an apprenticeship of not less than three years with a good general surgeon or special surgeon. The success of his future then depends on his appreciation of the living pathology.

Souchon. Number of years not to be taken as a criterion, rather the experience he has had.

Stewart. Not less than five years.

Taylor. Two or three years.

Vaughn. Depends on his opportunities, five to ten years.

QUESTION FIFTEEN

How long should he serve as assistant to a surgeon?

Babcock. Until he wins his spurs. If in six years he has not developed considerable ability and independence he has probably made an unwise selection.

Barker. Two to five years.

Bloodgood. This cannot be answered. He should have his fundamental training first,then his hospital internship. Then a short temporary association with an experienced surgeon. Without the fundamentals he may never get beyond an assistant.

Cabot. I doubt whether more than three years can profitably be spent as assistant to a surgeon.

Downes. Varies with each man but certainly not less than five years.

Eardman. Five years.

Finney. Simply serving as assistant to a surgeon is of little value.

Kennedy. Not over two years.

Lewis. Two years or more.

McGlannan. Eight years.

McGuire. At least five years.

Morris. At least two years.

Ochsner. From three to ten accord-

ing to the position he expected to take later.

Parham. From three to five as a minimum.

Pilcher. Five years.

Souchon. Four to five years.

Taylor. One or two years.

Vaughn. Three to five years.

QUESTION SIXTEEN

In what direction lie our greatest opportuniites in the future?

Babcock. In non-operative therapeutic measures to supplant present crude methods.

Barker. Any bodies guess. Better and earlier diagnosis; more prevention; better organization; better after care; closer co-operation of surgeons and physicians.

Blodgood. The education of men and women in the fundamentals of medicine in all its departments.

It should begin in the primary schools, continue through the university associated with a pre-medical course; then in the medical department of a university; then as interne of one or more years in a standardized hospital; then in association with a group in the practice of medicine, still with some association with a hospital if possible.

There should be great post-graduate departments of medicine in our universities.

All of this is being done and in addition our different medical societies of all types are becoming of distinct value.

The entire medical profession should combine and aid in every way all the agencies at work so that throughout the country we will have a definite educational program. If the public insists that our medical schools shall be of the highest grade there is no question that such medical departments will develop.

The same is true of our hospitals, the same is true of private practice. What the public demands they will get, but the public must be educated to know what is best for them.

Cabot. I think there is some danger of modern medicine getting out of touch with the public. The increasing specialization of medicine and the diminution of the number of sound general practitioners is leaving the public in the air. We must see to it that this does not adversely affect our position . Physicians are today being replaced in the field of preventive medicine and public health by men not trained in medicine but chiefly in sanitary engineering. This should not be allowed to continue. The profession must do more to co-operate with other agencies in the care of public health instead of putting ourselves in a position of opposition to various proposals alleged to be likely to benefit the people at large, but should have a constructive program carefully worked out upon which to oppose propositions like state medicine and compulsory health insurance. In a word, then, should say that our greatest opportunity lay in the direction of co-operation among ourselves in working out the future of group medicine and co-operation with the public in the care of the public health.

Eardman. Prophylatic medicine.

Finney. In the direction of more thorough training in the fundamentals both in the medical school and in the hospital.

One cannot build much of a superstructure without a deep well laid foundation.

Kennedy. Preventive medicine.

Morris. Our greatest opportunity in the immediate future lies in the development of the fourth era in surgery, in other words, the idea of making the greatest possible use of the patient's own protective resources.

Ochsner. Prventive medicine in the prevention of cancer, tuberculosis and other infectious diseases.

Parham. I believe the greatest good may be expected in the future from collective investigation, such as that Dr. Codman and Dr. Bloodgood are now undertaking through the American College of Surgeons with regard to the treatment of sarcoma of the bone, and what Dr. Estes is doing to standardize the treatment of fractures. I do not believe that surgical technique may be expected to improve materially but the follow-up method so strongly urged by Dr. Codman and others is calculated to crystalize our knowledge and give us much better understanding of the best procedures after a consideration of a large number of cases.

Pilcher. Co-operation .

Souchon. Specializing.

Stewart. Increasing and broadening our medical education.

Taylor. Metabolism.

Vaughn. Preventive medicine and and skillful conscientious surgery.

THE PROBLEM OF LATE SYPHILIS

By WALTER E. VEST. M. D.
Huntington, W. Va.

Oration in Medicine delivered before the West Virginia State Medical Association, Charleston, W. Va., May 24, 1921.

"Ill is the wind that blows no good" is a trite and true adage which might well be applied to the recent World War. With the appalling loss of life, the staggering destruction of wealth, and the utter anguish touching practically the whole of civilization have come some things which make for the betterment of mankind. And the "back wash," so to speak, has not been an unmixed evil. True it is that the receding waves of the tempest have left the beaches of civilization strewn with the driftwood of bolshevism, anarchy and sundry other ills, but here and there with the trash may be found something worth while. By no means the least of the benefits to America has been the venereal disease awakening and the determination to wipe out, or at least materially reduce, this evil as old as civilization itself.

It is our purpose tonight to consider certain aspects of the great systemic venereal infection, syphilis, called by one of the leading American authorities, the "Third Great Plague." This preventable disease so pervades every stratum of our present day society, is so varied in its manifestations, and so destructive morally, mentally and physically, not only to the individual but to society at large, as to constitute a very grave problem both medically and economically. Being hereditary as well as acquired, and transmitted by modes innocent as well as by modes guilty, we find lues in all walks of life, infecting alike rich and poor, young and old, saint and sinner, grave and gay—especially the sinner and the gay.

With the origin and history of syphilis, we shall concern ourselves little. One school of investigators believes that unmistakable evidence of the disease has been demonstrated in skeletons which antedate even the dawn of written history. Buret holds that the plague

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which Jehovah visited on Paroah and his house because of the beautiful Sarai, the wife of Abram, upon the occasion of their visit to the Egpptain court, must have been lues. Moreover, he argues that David contracted the disease from Bath-Sheba, the wife of Uriah the Hittite, and cites as proof the facts that their first-born lived only seven days of feeble sickly life, and that David in the fifty-first Psalm, lamenting his sin with the spouse of his warrior, complains that God has broken his bones in punishment. In defense of the Psalmist however, we would direct attention to the fact that a later son born to him and Bath-Sheba, King Solomon, did not, at least mentally, present the stigmata of hereditary syphlils. Opposing the theory of old world origin, other investigators of the subject believe that Columbus discovered both America and syphilis, his sailors contracting it from the native women of the island of Haiti.

The incidence of syphilis is hard to determine with any degree of exactness. It is scattered over the civilized world truly a pandemic disease. Owing to the indefensible double standard of moral chastity males are much more commonly victims than are females. Stokes estimates this ratio at 5 to 1. It is probable that a larger percentage of the urban population is infeeted than the rural and this is certainly true of the greatly congested centers. Practically all prostitutes are victims. From the racial standpoint, definite statistics are lacking, but all students of the problem concede that negroes are much more generally infected than whites. As to the total population, figures vary widely. One estimate we have seen is that one-third of the insane, one-fourth of the felons, and one-tenth of the total population of America are syphilitics. Vedder basing his figures of the 1910 census, places the syphilitic population of the country over fifteen years of age at 3,842,526, a greater number than all the inhabitants of the two Virginias combined! Warthin's view is indeed gloomy, not to say dumbfounding. He considers thirty percent of the entire population syphilites. All available statistics considered, it seems fair to conclude that not more than one in ten Americans are infected, and that the prevalence increases as the age of the group under consideration.

And now we approach that phase of the disease which properly belongs within the domain of internal medicine—late syphilis, or to use the classic terms, the tertiary and quaternary stages. This is the stage that is most hideous, maiming the victim, and if unchecked finally killing him after a lingering life in death. So protean are the manifestations of lues that it overlaps all the specialties of both medicine and surgery, and it behooves all practicians of the healing art to be ever mindful of the possibility of the treponema pallidum as an etiological factor in any particular diagnostic problem. There is no clear cut line of demarcation between early and late syphilis, either as to duration of the infection or manifestations, but rather what at times might be considered a twilight zone between the two. It is our custom to include in the late classifications the latent causes, the gummata, the bone, joint and visceral involvements generally, the late hereditary type, and the neurologic complications.

The proportion of late involvements to the total number of infections is difficult to determine exactly. This is due to the facts that knowledge of so many early cases is suppressed and that so many fatalities from causes which

are really spyhilitic are labelled something else on the death certificate in order to spare the feelings of relatives. Very few syphilitic deaths are chargeable to the secondary stage, the overwhelming proportion of them being due to the so-called "late accidents" which are anythings but accidents in the modern sense of this term. Dr. Farnsworth informs us that of approximately ten thousand cases which have been reported in West Virginia one-third are in the late stages. Engman in a study of five hundred cease seen in a St. Louis clinic found that 15% were definitely latent—that is, no objective evidence of the disease was present except a positive Wasserman. The American life insurance companies have found that in all men insured giving a history of penile sore regardless of whether the lesion was a true chancre or not, the actual mortality is 135% of the expentancy and in known syphilitics who have had two years treatment and have been one-year symptom free prior to insurance, the percentage has mounted to 190. Kolmer in analyzing the insurance statistics finds that the average insured syphilitic fails by a decade to live up to his expectancy, or in other words, that lues for the average individual shortens the span of life ten years. Also he finds that the percentage of deaths in luetic subjects from diabetes, pneumonia and suicide is far above the average. Dr. Frank Williams in a study of 100 cases of syphilitic insanity found an abbreviation of life below expectancy ranging from eight to thirty-eight years, with an average shortening of twenty-two years and six months The mortality reports of the urban communities of Pennsylvania for 1920, show a death rate of 141 per hundred thousand of the population for tuberculosis, 163 for cancer and 220 for syphilitic sequelae.

If this ratio holds good for the entire nation, the number of urban deaths from syphilitic causes last year in continental United States reached the staggering total of 121,000, or a sacrifice of life one-fifth greater than America made in the World War, and these figures exclude deaths among a rural population of more than fifty millions. The Journal of the American Medical Association sums up editorially the histories of 4,134 primary lesions occuring among officers of the Austrain Army between 1880 and 1900. By January 1, 1912, twelve years after the last infection there had been a total mortality of 546, a death rate of 13.2%. Of the 3,588 living, 198 were victims of progressive paralysis, 113 of tabes and 132 of cerebrospinal complications, eighty of the last mentioned being insane. Thus in a group of men apparently above the average in intelligence and described as "sexually enlightened," followed from 32 to 12 years after infection, 24 percent were either dead or chronic invalids. Of those dead, 147, or approximately one-fourth, had died of tuberculosis, 83 were suicides, and 101 has succumed to cardiovascular conditions. It has been definitely proven by our Public Health Service that one-eight of all deaths are due to tuberculosis, and from these statistics it would seem that a leutic infection doubles one's susceptibility to the bacillus of Koch. More than 15% of those who had succumbed had perished by their own hands. We are unable to secure definite figures, but it seems probable that 1% of all deaths is a liberal estimate for suicide and that a chancre increases 1500% the chances of self murder! While these statistics really represent the sequelae of the presalvarsan era,

they represent as well a picked group of men physically and can are so situated as to secure the best then offered in treatment, and probably are not misleading as to our total population of today.

The economic importance of this question can hardly be concieved much less definitely computed. In his study above referred to, Williams found that it cost the State $393,12 per patient to care for these men from the time of their commitment to death. Moreover seventy eight indigent wives and 109 dependent children were the human legacy these hundred wreeks left to society as a charge. Hazen estimates that the annual monetary loss is nearly half a billion dollars for the United States alone. The time lost because of syphilis in the American Army for the year 1917 was 213,160 days or 584 years. If we take Kolmer's estimate that syphilis costs each individual infected on an average 10 years of life and assume that the Pennsylvania statistics hold good for the entire country, the Third Great Plague levied on American city life in 1920 a total toll of 1,210,000 years. The wage loss computed at one dollar per working day would amount to $378,730,000 or a sum equal to one-third the annual interest charge on our public debt. Stated another way these figures amount to a per capita of $3.50 for every man, woman and child in the United States.

As to the prognosis in lues generally, Hazen sums up the situation in these terse words: "Verily the fate of the syphilitic is doubtful." In late syphilis the outcome depends upon: (1) The individual infected; (2) The strain of the infecting spirochaete; (3) The duration of the infection prior to the initiation of the treatment; (4) The duration and intensity of the treatment; and (5) The anatomic structures involved and the extent of their involvement. Under the individual element we would exclude not only the variability with which different individuals respond to infections, but the habits of the person infected; his enviroment, and especially his mentality. The use of alcohol is a distinct detriment and some observers believe predisposes to an invasion of the nervous structures. Generally speaking, the better the environment and the higher the mentality of the patient, the more prospect there is of a cure. While the profession is by no means unanimous, it is probable that there are at least two varities of spirochates, the dermatrope with a special affinity for epithelial tissues and the neurotrope possessing a particular tendency to invade the nervous system. As to the third and fourth points enumerated above, we might with almost mathematical precision announce the following law of prognosis—: The probability of a cure in late syphilis varies inversely as the length of the interval between infection and the beginning of treatment, and directly as the intensity and the duration of the treatment. In other words the earlier treament is begun and the more faithfully and intelligently it is carried out, the better the prognosis as to final cure. When we consider the anatomic structures involved, it is probable that the outcome is best when the skin and bones are attacked. The sears may tell a tragic tale, but the outlook as to life is good. Involvement of the abdominal organs and of the respiratory tract is fairly amenable to medication. The eye and the ear are more resistant and when the cardiovascular structures and the nervous system are invaded, veritable havoc is the result. Regardless of any apparently good results from treatment, a

late syphilitic patient should be carefully watched throughout life for verily the sword of Damocles hangs over his head.

The prophylaxis of late syphilis combines all the means used to prevent early syphilis plus the thorough treatment of the early form. Wile studied 120 cases carefully to determine the cause of late manifestations. He believs that trauma plays only a slight role in the production of late active lesions and its influence is limited to gummata in or around the skeletal structures. He thinks that no latent untreated case is immune to the late accidents for he saw one gumma which appeared forty-four years after the initial lesion. His principle conclusion is: "By far overshadowing all other causes of late syphilitic sequelae, the lack of, or inefficiency of treatment during the early period stands out as the most important factor," and "in treated cases the occurrence of late sequelae, except for isolated and exceptional instances, must be regarded as an indictment against the method of treatment."

Each case of late syphilis appearing for treatment presents a problem. A careful general examination should be done to determine the presence or absence of non-syphilitic complications as well as the extent of the specific involvment. If no contraindications exists to the arsenicals, salvarsan, or neosalvarsan should be used and mercury is a sheet anchor. If gummatous infiltration is present, and this is practically always the case, the iodides are indispensable. The necessity of persistent and prolonged treatment should be thoroughly explained to the patient and, with his consent, to his friends as well. Merely because the disease is seen in a late stage is no reason why a cure should not be attempted. Until very recently there has been too much of a tendency on the part of the medical profession to consider the late syphilitic hopeless and not to make a real effort at his cure. Especially was this true in neuroleus. The Wasserman reaction is the best treatment guide at our disposal, although we cannot help but believe this procedure is much abused. Only a skilled laboratory worker should be entrusted with it for in the hands of a noviee the findings may be worse than useless. The idea is widely prevalent among the laity that a negative blood report excludes syphilis and much harm is resulting from this erroneous notion. A positive reaction in the hands of a competent laboratory man is the best single bit of evidence we have towards making a diagnosis of late lues, but a negative reaction is meangingless. Positive findings are by no means as constant here as in the early type of the disease, and the clinical signs are always, of course, to be considered in conjunction with the laboratory evidence. The treatment should probably in all cases be extended over a period of at least three years, and no matter what structures were originall involved, no case can be considered cured until all symptoms and signs have disappeared and both blood and spinal fluid are normal. In all cases of late lues the spinal fluid should be examined as to Wasserman, globulin, and cell count. These usually show similar findings, but such is not always true.

In addition to specific treatment, the cardiovascular conditions require other appropriate measures, the most important of which is prolonged rest. If an aneurysm is present, the minimun of rest in bed should be three months. At best, the outlook is poor when the heart and aorta have begun to give way, and

the strain on these organs should be relieved as far as possible in order to give the damaged musculature an opportunity to recover its lost tone.

When we consider that approximately one in three late cases have the central nervous system invaded, the wide scope of Neurosyphilis manifests itself. Of the three general clinical subdivisions, it is probable that cerebrospinal lues is most amenable to treatment, and paresis least. Generally speaking tabes can be arrested but while the progress of the disease is stopped, the damage already done is beyond repair. The importance of recognizing promptly the early symptoms of nervous involvment and of immediate treatment cannot be too strongly stated, for this is the only way by which these unfortunate mortals can be reclaimed. It seems that the method of choice in the management of these cases is the combined intravenous and intraspinal administration of salvarsan using autoserum and following the technique of Ogilvie as practiced by Tucker. This procedure seems to promise better results than any so far tried. In both cerebrospinal lues and tabes fairly satisfactory results can be secured, and early paresis can often be benefitted. The Boston medical and surgical Journal recently reviewed the histories of a series of eight paretics four years after treatment. Two were dead after remissions of eighteen months each, one had been recomitted after a three years remission, two were able to care for themselves and three were entirely well. Personally we are convinced that when paretics have reached the demented phase they are hopeless, but that all other cases of neuro-leus should be given the benefit of intensive treatment. Otherwise their course is progressively downward. Treated as best we know how, some of them are losses and our efforts failures, but some are reclaimed and our labors crowned with success. Let us then endeavor to salvage as many of these human derelicts as possible. It is the function of our profession to prevent such human wreckage. Education and the inculcation of morality can do much, but we should ever be on the alert to detect the presence of syphilis and when found it should be treated persistently and consistently, for only by proper treatment can we limit its spread. So long as promiscuous intercourse persists, contagious syphilis will be transmitted. The sexual passion is the strongest of human instincts, hunger and self-preservation excepted, and only the millenial dawn will find sexual congress limited to the nuptial couch.

SOME OBSERVATIONS ON CEREBRO-SPINAL MENINGITIS WITH PARTICULAR REFERENCE TO ITS TREATMENT

By M. I. MENDELOFF, M. D.
Charleston, W. Va.

Read at Fifty-Fourth Annual Meeting of W. Va. Medical Association May, 1921.

The meningococcus is found to exist only in the human host and its normal habitat is the naso-pharynx of patients and carriers. From the naso-pharynx it reaches the meninges in a way which is not clearly understood.

It is thought that the disease is not primarily a meningitis, but a sepsis with secondarly involvement of the meninges, joints, endo-and peri-cardium and lungs.

The meningitis is preceded by a stage showing signs of a generalized infection. This co called pre-meningitic stage lasts

from 12 hours to 3 days before meningeal signs and symptoms set in, while in a small percentage of cases meningitis never develops.

The recognition of this premeningeal stage depends upon clinical and bacteriological evidence. Clinically, there is fever, as a rule, not over 102, slow pulse, and there are digestivve and respiratory symptoms. There is weakness and dull mental apathy, the patient lying still with his legs and knees drawn up. When asked questions he replies in a slow and languid manner, as though preferring to be let alone.

In about 75% of cases there is a petechial rash from which the disease originally received its name of Spotted Fever. These petechiae are found on shoulders, pelvis, trunk and extremities.

Next to the rash the reflexes give valuable early evidence of the disease. There is an unequal increase of the deep and superficial reflexes. The epigastric, cremasteric, Tendo Achilles, knee jerk, all are unequally increased. Headache is present in a large proportion of cases.

These clinical signs demand lumbar puncture. In the premeningitic stage the fluid is clear in about 60% of cases, under somewhat increased pressure, contains a normal number of cells, and reduces Fehling. The meningococcus can be discovered in this fluid before symptoms of meningitis set in. To obtain the best results the fluid should be taken to the laborotory in a warm container, such as a Thermos bottle, and the fluid centrifuged at high speed.

In about 30% of cases the organism can be isolated from the blood.

TREATMENT

A patient presenting a combination of early symptoms should have a lumbar puncture done. If fluid is turbid and under great pressure, about 40cc., or more fluid should be withdrawn and 20cc., of Antimeningococcic serum slowly given into the spinal canal. If fluid is clear no serum is given until the laboratory examination reveals the presence of the organism. It is well to take a blood culture at the same time.

While awaiting report from the laboratory the patient receives small desensitizing doses of the serum. Small amounts of Antimeningococcic serum are injected at frequent intervals subdermally and intravenously and the effect noted. If no reaction is present and the laboratory examination shows presence of the organism in the fluid or culture, 60cc., of the serum in twice the amount of salt solution is slowly given in the vein. Care should be taken to give the serum very slow and as soon as cyanosis or shock are noted the injection is discontinued and 15 drops of Adrenalin solution 1:1000 are injected subcutaneously.

In the ordinary case the intravenous therapy should be repeated once in 24 hours, while in the more severe cases once in 12 hours. The lumbar puncture is repeated every 8 or 12 hours depending upon the severity of case.

It is difficult to say how much serum should be given in a given case. I have given as much as 1000cc., intaspinally and intravenously with recovery. However it is possible t ooverdo the treatment. When the introduction of the serum causes headache and delirium it is well to discontinue the serum even though the fluid is turbid and contains organisms. In a few days you will find the fluid clear and free from meningococci. Occasionally lumbar puncture causes marked tingling in the extremities and exaggeration of all symptoms; it is well then to stop all treatment for a day or two.

Morphine, Chloral, Bromides and heart stimulants are important adjuvants in the treatment of the disease.

The serum rash will be found troublesome to some patients particularly when associated with joint symptoms.

The convalescence is frequently interrupted by the various complications, such as those referrable to the eye, ear, joints, and heart.

In conclusion I want to give a brief account of some cases treated by the combined method of intravenous and intraspinal therapy.

Case 1. Sgt. H. Lumbar puncture turbid fluid under great pressure, positive for Meningococci; blood culture negative. 18 lumbar punctures. 250cc. of serum intravenously, 300cc. serum intraspinally. Convalescence interrupted by serum rash, arthritis and marked asthenia. Recovery with discharge from the army.

Case 2. Pvt. S. admitted to Hospital unconscious. Blood culture positive. Spinal fluid shows numerous meningococci. Treatment consisted of 100cc. serum given intravenously and 360cc. intraspinously. 16 spinal punctures. Following the first intavenous injection developed marked delirium followed by shock. Very good convalescence Complains of weak back.

Case 3. B. Colored. Blood culture and spinal fluid positive for Meningococci. A total of 150cc. of serum given intraveneously and 600cc. intraspinously Several relapses. 30 spinal punctures. Marked asthenia treated with intravenous Dextrose sol. Slow gradual improvement.

Case 4. Lt. S. Spinal fluid positive, blood culture negative. A very severe case with relapses. 34 punctures. A total of 160cc. of serum intravenously, and 720cc. intraspinously. Recovery with paralysis of the facial nerve and the external rectus.

Case 5. Sgt. G. Unconscious on admission, severe case, 38 punctures. Blood culture positive also the spinal fluid. A total of 240cc. of serum given intravenously, and 820cc. intraspinously. Recovery slow and gradual. Paralysis of external rectus.

KANAWHA MEDICAL SOCIETY
Charleston, W. Va.

June 25, 1921.

Dear Doctor:

At the meeting af the KANAWHA MEDICAL SOCIETY, on May 3, 1921, the Councilors of the Sixth District of the WEST VIRGINIA MEDICAL ASSOCIATION were asked to investigate all angles of the nursing profession in this city and county, and to make such recommendations as they deemed proper.

The Secretary has been requested by the Society to send a copy of this report together with the report of the action taken by the Society at its last meeting, so that every member will be informed. The report is as follows:

The Kanawha Medical Society

May 19, 1921.

This Committee, appointed at the last meeting of the Society to investigate the rumor of a wish for the nurses of the city to have twelve-hour duty, and also to investigate the registration of the nurses of the city, wishes to make the following report:

'We find a registry as conducted by Miss Mary E. Reid, the same having been started by her about 12 years ago, and now conducted by her on Morris Street, for the benefit of the general public, of the nurses and for the doctors. We also find a registry run by the St. Francis Hospital which appears to be

for the benefit of that hospital alone. We find that there is no co-operation between the two registries.

We find nurses are doing regular duty—that is, they are having fourteen hours duty, six hours sleep and four hours for recreation, and in special cases where it is necessary on account of the illness of the patient—nurses are doing twelve-hour duty.

We find that there has been some agitation (unofficial) to get twelve-hour duty for nurses especially in hospitals and that a meeting was held at which there were seventeen nurses, to discuss the 12-hour system. The result of this meeting has not been disclosed.

We find the 12-hour system looked on with disfavor by all persons with whom the matter has been discussed, including doctors, nurses, and hospital superintendents, with the exception of the Superintendent of the St. Francis Hospital; she having expressed herself as favoring the 12-hour system in hospitals, and thought that it would be a good plan to have this in hospitals and have nurses doing private duty to do the regular 14-6-4 duty.

We find the number of nurses in the city, seventy-two; the number belonging to the Nurse's Association, thirty-two; the number belonging to Miss Reid's registry, sixty-three, about twenty of whom do not report to her; the number who pay into Miss Reid's registry for services rendered, twenty-seven. One-fourth to one-third of the nurses in the city wish hospital work only; when doing hospital work only—in some instances—object to accompanying the patient to their homes as is necessary in some instances. A few prefer certain kinds of cases, such as obstetrical cases; one or two have requested that they be relieved from diphtheria cases on account of some throat susceptibility.

We find on Miss Reid's Registry that all nurses are asked to give their credentials when applying for admittance to the registry and that this request for credentials is a requirement by the State Association. We also find that there is a charge of ten dollars per year for the services of the Registry.

We find that there are some nurses registered with Miss Reid who have not passed the State Board, but are doing regular nursing work in the city.

After a conversation with various people interested in the above and after due consideration, we wish to recommend the following:

First: That all nurses belong to the State Association.

Second: That they all pay a registration fee of ten dollars through the Association to a General Registry.

Third: That there be one Central Registry to whom all nurses belong.

Fourth: That each nurse report to the Central Registry on leaving each individual case, so that the Registry will be able to know where these nurses are.

Fifth: That the person in charge of the Registry give the names of the nurses who are off duty, begining with the one longest off a case, to anyone calling the Registry for a nurse and allowing the caller to choose the nurse wished.

Sixth: That all doctors uphold a Central Registry and call through this Registry only.

Seventh: That nurses accept all duty —private, hospital, good, bad, pleasant or unpleasant as they are called and not differentiate.

Eight: Realizing that to get a good service we need centralization, and co-

operation is absolutely necessary and recommended.

Ninth: That any differences of jealousies between any parties connected in this work be forgotten and that every effort be made by doctors and nurses and those in charge of the registry to be courteous and reasonable, and that an effort be made at all times, especially at times when there is a great deal of sickness in the city, to distribute the nurses where they are most needed.

We hope that an effort will be made to establish this Central Registry and think that the proper persons to determine in whose charge this registry should be are the Doctors and Nurses combined.

Respectfully submitted,
R. H. Dunn,
Jno. Wm. Moore,
Committee.
June 21, 1921.

Kanawha Medical Society,
Charleston, W. Va.
Gentlemen:

Your committee has had a conference with a committee from the Graduate Nurses' Association of Charleston, and beg to report as follows:

The following is a report of the meeting held by the Graduate Nurses Association on May 27th, 1921, submitted to us.

By request of the Kanawha Medical Society a special meeting called of all the graduate nurses in Charleston was called to meet in the nurses home of the Kanawha Valley Hospital May 27th.

Meeting called to order by Miss Anna Bessler, District President.

The communication from the Kanawha Medical Society relative to the twelve hour duty proposition and registry was read and discussed.

Miss Jennie Lloyd opened the discussion favoring the twelve hour duty system and opposed to the idea of the doctors interfering with any business or arrangement the nurses of Charleston proposed to transact or to put in effect. Questions were discussed by other nurses along the same lines. Miss Lail and many others opposed the proposition in their discussions, a vote being taken on the proposition of the twelve hour duty for nurses, there were seven votes in in favor and thirty opposed. Miss Lloyd, Miss McLaughlin, Miss Grishaber, Miss Samples, Miss Mannix, Miss Fisher, and Miss Dawson are the nurses who voted in favor of the twelve hour duty system.

Next question, that of a central registry, which was discussed and a vote taken. The vote was unanimous to have Miss Reid have the registry as she has had the past twelve years, and that each Graduate nurse pay in the registry, a fee of ten dollars a year for registration.

A committee of three composed of Miss Lail, Miss Gianni and Miss Ray was appointed by the President to confer with the Kanawha County Medical Society committee.

We had a conference with above committee and the following points were discussed.

(1) Suggested by us that all nurses in Charleston be requested to join the Association. This was agreed to by committee.

(2) That the Register be the register of the Association and that members of the association only are to be registered. This was agreed to by the committee.

(3) That the Association collect from each member ten dollars per year for the use of the register from January 1st to December 31st, or in that proportion. This was agreed to.

(4) That Miss Reid take care of

under-graduates, outside of the registry.

(5) That nurses take all cases they are called to unless there is some physical reason on the part of the nurse for not doing so, and that nurses do not specialize.

From the above the following questions are settled:

(1) Miss Reid to have the registry in charge.

(2) Miss Reid to be paid by the Association ten dollars per year for each nurse registered.

(3) That the Registry register only members of the Association.

(4) That the nurses work on 14-6-4 duty except in special cases.

In order to support this it will be necessary that all doctors and hospitals make it a point to call through the registry only and insist that a nurse be called in this way only.

That the doctors supplement the revenue collected by the nurses for the support of the Registry in order that the regitrar may have sufficient salary, and that this additional revenue be paid through the Kanawha Medical Society and not individually. If all the nurses who are now in the city pay into the Registry $730.00 would be collected. We think the Registrar should have $100.00 per month, if so, about $500.00 would have to be raised by the doctors. We suggest that each member of the Kanawha Medical Society be assessed through the society $2.00 each, and that the hospitals be charged a fee to pay the balance, in proportion to the number of beds.

We want to lay special stress on the importance of every doctor and hospital placing all their calls for nurses through the registry, and to the fact that the nurses of the Association have agreed to register after the completion of each and every case."

After a free discussion of the report, Dr. Churchman moved that each member of the Society be assessed $2.00 annually to aid in maintaining one Central Registry for nurses, as recommended by the Councilors, and that the hospitals out of the city be asked to donate a sum sufficient to make the total $500.00. (As there are 120 members of the Society, $2.00 each, the Society's amount would be $240.00; the hospitals' share $260.00).

The motion was seconded by Dr. Nicholson, and was unanimously carried. Dr. Moore then introduced the following resolution:

"RESOLVED. That it is the opinion of the Kanawha Medical Society that it is the privilege of the Nureses' Association to name the Registrar for the Nurses' Registry, and this appointment to be approved by the Kanawha Medical Society; and it is the privilege of the two bodies to change the regitrar on occasion. The Kanawha Medical Society reserves the right to refuse to pay for the maintenance of the registry when in the Society's opinion it is not being properly handled."

The resolution was unanimously adopted.

Dr. MacQueen moved that this Committee of Councilors be retained in order to follow up its recommendations, which motion was unanimously carried.

This report is surely worth your careful consderation, and if you are anxious to be relieved of constantly using the telephone trying to corral an available nurse, you will abide by the recommendations of the Committee.

Fraternally yours,

E. Bennette Henson,

Secretary.

INSIDE INFORMATION

By WITHROW MORSE, PH. D.

(Professor of Physiology and Physiological Chemistry, Morgantown. Recently Chief of Chemistry, Nelson Morris Memorial Institute For Medical Research, Michael Reese Hospital, Chicago)

Of the twenty-four hours of an average physician's day, perhaps eight at a minimum are occupied in obtaining, or in trying to obtain information concerning what is going on inside a human being. The laboratory may be defined as the place where he goes for his information; for while he may carry his laboratory with him, in the form of a blood-pressure apparatus, or even a watch for counting the pulse, modern medicine demands a well-equipped laboratory with a multiplicity of apparatus.

In a modern hospital laboratory, there are generally four parts, namely Pathology, Bacteriology, Serology and Chemistry. The specialization of today makes it impossible for one man to conduct so much as even two of these parts, unless the institution be limited to say 200 beds. Consequently, there are generally four men, or equivalent women (if any woman is equivalent to a man) and the training demanded of these workers is such as to command a wage of no small value. The question is raised, therefore, in many cases, of what value in dollars and cents are these departments? Generally, there is little question concerning the pathological laboratory, for spindle-cell sarcomas must be indentified so that the surgeon may know what to do. There is, likewise, little question as to the Bacteriologist, for tuberculosis must be recognized. There is perhaps more question concerning the serologist, but with later day venereal disease investigation and the awakening conscience in the laymen as to the consequences of the dangers of syphilis, it is generally conceded that the serologist is earning his way. The case of the chemist is less readily accepted.

What bread does the chemist bake? How can he be considered an integral part of a medical plant? Are not the albumin test and the sugar test adequate for diagnosing nephritis and diabetes? Why all the frills of ambard coefficient and mosenthal diet and all that?

Let us look a little below the surface and see what the average chemical laboratory of a large hospital is called upon to do as a daily routine.

No one will deny the importance of the diet in such diseases as Nephritis and Diabetes. If you admit this, you admit the chemist to be a sine qua non, for the diet kitchen begat the chemist and the diet kitchen is, we admit, indispensable. Without the data given by the chemist as to the amount of sugar, quantitatively in that diabetic urine; and without the albumin quantitatively estimated in that case of nephritis, the dietician is unable to tell whether the patients are receiving the amount of protein and carbohydrate necessary, too much or not enough. Moreover, that is not all. In the case of the diabetic, you must know whether you are starving the patient to death, whether he is using fat or whether he is using protein. You may answer that the intern can give all the data. If you believe that, ask any interne how much time he has to give to the laboratory and ask nim what the physician attending the case and with whom he works has to say about his "Fooling around the laboratory when he should be studying the case." It is all too true that the

time of the average intern is dissipated with much which could be eliminated. It is here that a paid chemist comes in.

Now we are not done with the Nephritics and Diabetics. It would be easy enough if one could be certain a man has no kidney involvement by running the albumin and casts in his urine, but he can not. Incipient Nephritis shows no Albumin and no Casts, but it does show lowered uric acid elimination and increased uric acid in the blood. In other words, we must have "Inside information." Urine and blood uric acid figures are to be compared. Blood sugar must be estimated to give the answer for incipient diabetes. Tolerance tests using the blood and urine must be made. All of this falls to the task of the chemist.

But there are many other instances where the chemist pays his way. Let us take the case of the surgeon who does not wish to operate, although he feels that there may be a white kidney in the process of the making. The Roentgen picture is inconclusive. Palpation is worthless. What can the chemist offer? He says to the surgeon, if you will catherize the ureters, one specimen for the first hour and the second specimen for the following hour, I will give you the answer. The chances are more than even that both kidneys will not be envolved to the same extent and it is usual that one kidney is normal and so this simple differential test will shed the light desired.

The desire for inside information reaches every department of the hospital. I do not even except the dermatological clinic. Let me give an example. A rare disease involving a skin lesion was discovered. It was not identified in its true light until after death, when histological sections showed the case to be Dermato-Myositis. Now it is familiar to every chemist that in all muscular atrophies, the creatin in and creatin of the urine assume pathological pictures. Inasmuch as we know that creatinin is a constant factor for every individual and in the normal male past adolescene, no creatin appears normally in the urine, The urinary picture would have indicated that besides dermatitis, there was involved an atrophy of the musculature.

But one of the greatest aids the chemist can offer is the identification of lesions in the larger organs of the body in cases where the physician can not determine what is the matter by studying the outside picture. The kidney efficiency we have discussed. The liver is an organ which offers many perplexing conditions. Cirrhosis is easily confused with Cystic Duct or Cystic trouble; the presence of an Ascaris in the duct may give the picture of liver involvement. What can the surgeon do but operate in an exploratory laparotomy? Well, he can consult the chemist. Max Kahn has shown that by estimating the eterial sulphates before and after feeding thymol, one can determine whether the liver is working as it should; for if it is, it will conjugate the thymol with the sulphuric compound and the amount of ethereal sulphates will be lower than before the thymol has been ingested. On the other hand if the liver is not normal, then the ethereal sulphates will be the same as before.

The writer, in connection with Dr. Levinson, Chicago, worked out another means of diagnosing the injured liver, by taking account of the hippuric acid increased in a normal liver when sodium benzoate is feed, whereas, if the liver

is involved, there will be no increase in hippuric acid.

These are some of the things the chemist is doing for the physician, I have not mentioned dozens of others, many of no less inportance, but perhaps enough has been said to show that the chemist earns his way.

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The West Virginia Medical Journal

JAS. R. BLOSS, M. D., Editor
O. R. ENSLOW, M. D.
J. E. RADER, M. D. Assistant Editors

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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THE SHEPPARD-TOWNER BILL

Fellow members what do you know about the provisions of this proposed piece of legislation by the Congress of our goverment? Do you know that it has passed the Senate and is now before the House for consideration?

This is a pernicious piece of proposed legislation. There are a few members of our profession with sufficient interest and perspicacity to see the unthought of evil hidden under the guise of a measure which the sentiment of mankind will endorse in general.

It is to be seriously regretted that the members of our profession do not thoroughly understand the underlying features of this bill which has gained much encouraging support through the press, and other sources, that has been founded upon sentiment rather than the knowledge possessed by those who deal with the practical methods of providing better maternity care for expectant mothers. This is a crying need in some sections and among certain classes.

None of will deny this, I am sure. We do not complain against this bill upon the ground of its not having an excellent aim, but because of its vague provisions except, as one opponent puts

it succinctly, "in everything but its title and financial provisions."

This is a question which certainly should be under the control of the various states and the municipalities thereof. If help is desired of the Federal goverment it should be so provided that the states could secure this through channels under the control and direction of the Medical services of the U. S. and not have to go begging to the Children's Bureau in the Department of Labor for permission to pursue a certain proposed program along the lines under discussion. If the Department of Labor did not approve then no Federal aid would be extended. One ammendment feature proposed to stiffle some objectors, provides for an "Advisory Board" which MAY be called into consultation by the Children's Bureau. On this board ONE physician is placed, along with the Sec'y of Agriculture, the Sec'y of Labor and the Commissioner of Education. Naturally there can be no question as to the ability of these to pass upon carefully and understandingly as to Maternity care, pre- and post-natal as well as during the puerpurim.

Then its provisions in regard to the public nurses will place the administration et cetera very largely in the hands of women who are not capable of taking upon themselves the responsibility of carrying out programs which should be decided upon by the State and City Health organizations to meet conditions arising in the particular section. The problems to be solved in an industrial section will be vastly different from those of an agriccultural one.

Then again there is a peculiar thing about the great support given by organizations affiliated with the American Federation of Labor to a measure which is certainly purely a Medical one, but which is to be under the control of the Children's Bureau of the Department of Labor. A Nurses Union affiliated with the A. F. of L. is not too great a stretch of imagination. What would happen if there was a Doctors Union, a Lawyers Union, a Preachers Uuion also affiliated?

Continuning her opposition to the Sheppard-Towner Maternity Bill, Miss Alice Robertson, the only woman member of Congress, has declared in a signed statement that this bill in "its salient feature is not tangible help of the kind the general public infers would be given, but the establishment of an autocratic, undefined, practically uncontrolled, yet federally authorized center of propaganda." Miss Robertson challenges the accuracy of statistics presented by the advocates of the bill, saying that "they might find difficulty in pasisng the Ananias test. Because of the inexplicable failure of the majority of states to keep an official record of infant birth and mortality, necessary data for the required work could not be obtained. Registration gives the new-born a national and state entity. . . . Because of lack of registration, the United States can only infer and conjecture without facts." Miss Robertson attacks Senator Sheppard of Texas, one of the authors of the bill, and points out that in Texas there is no birth registration law and no accurate information on the subject of infant mortality. The same statement is made by her also with reference to Iowa, the home of Congressman Towner, co-author of the bill. She said in part:

We can only conjecture that the mortality of mothers and infants in this nonregistered state is probably much greater than is dreamed by its splendid

citizenry, and it might not be presumptuous to suggest that the women of Iowa, led and enthused by corresponding efforts of Messrs. Kenyon and Towner, would demand, through state action, this right of the new born.

In the meantime, throughout the land, wherever at the sureme hour there is need, the good Samaritan neighbor woman is ready to help as best she may, though her willingness may be unskilled. In due time, the Federal Children's Bureau, purveyor of "instruction," will possibly arrive and give "instruction" to the effect that medical attention should be secured and proper food, bedding, baby clothes and a trained nurse be provided, for none of which appropriations are authorized in the Maternity Bill.

Were the pitiless light of real publicity turned upon the methods which have brought the "Maternity Bill' thus far toward enactment, its most ardent proponents, in my belief, would in all fairness be compelled to allow time for the, as yet, unheard majority of women who know nothing of its proposed legislation to learn the facts and speak for themselves.

Gentlemen, this is serious. During the recesss of Congress it behooves every physician to address his representative in Congress in this matter.

IT IS A PERNICIOUS PIECE OF PROPOSED LEGISLATION.

"THE NURSES REGISTER"

It is to be hoped that the report of the efforts of the Kanawha County Society to bring about some satisfactory solution of this problem will be carefully read by the members.

This is a question which has been and is yet, causing a great deal of worry to both the Professions of Medicine and Graduate Nursing. I am sure that all of the larger cities of the State have the same unsatisfactory condition in this respect.

The proposed plan of the Kanawha Society is published in hope that it will bring to us communications from other cities as how they deal with it.

Please write your local experience that we may all see what can be done to bring about a more satisfactory arrangement.

LATENT LUES

It is with some trepidation that we approach this subject. In the past four years not only the laity but our own profession has been compelled to gasp for breath because of the facts brought to light by various medical services of our government during the mobilization of America's manhood. Can it be that so soon we are already forgetting the serious revelations given to us? It may be feared that this awful state of affairs is being allowed to sink into "innocuous desuetude" so soon.

This year's Oration in Medicine is an effort on the part of one of the "thinking" members of our Association whose work is purely internal medicine, so called, to make us Stop-Look and Listen.

We wonder just how much we physicians are going to have to answer for because of our sins of omission,as well as commission, in our past treatment of Syphilis?

In the past two years a Wasserman has become practically a routine with us in all patients not having a clearly defined acute ailment. We might even add in many of these, as well. The results have been astounding, when the pathologist has reported, in so many cases that one has at times wondered

if everyone would show a positive finding.

Certainly a negative Wasserman may be misleading and mean worse than nothing, as some of us have found by giving anti-luetic treatment in the face of the laboratory report when our "feelings" tell us we should do so.

A distressing thing in our experience is the number of Wasserman positive bloods we hear of, among women. And we do not mean women of the streets or of promiscious sexual relations, but among the housewives and mothers whose moral standing and behavior is above suspicion. This leads one to wonder at the widespread prevalence of this Fourth Great Plague and to realize the great possibility of its acquirement in a perfectly innocent and legitimate (not sexual either) mannner.

In view of our findings when we begin to delve more deeply into this question, the marvel is that we do not have far more Wide-spread latent results to deal with. Why there is not more Paresis, Locomotor, Cerebral Lues, etcetera than there is.

This disease in its early stage is one of the most amenable to treatment of all the ones we have to meet. There is one provision however, it must be treated early, correctly and persistently. If this is done our cures will be almost 100%. There are many difficulties to surmont, e. g., the indifference of many patients; the cost and time consumed for correctly treating these patients and finally the negligence of the physician are a few only which might be mentioned.

Those who are examiners for the various Mental Hygiene Commissions; the Superintendents of the State Hospitals for the Insane; those of our profession whose work is largely with consultations and referred patients are in position to see the end results in untreated or mistreated patients who may have contracted this disease either innocently or otherwise. Bear in mind that sexual intercourse is not necessary. I am inclined to believe that 50% of Wasserman positives did not so acquire it..

Read the Oration in Medicine in this issue of your Journal and think this matter over prayerfully in regard to your professional responsibility.

State and General News

ITEMS FROM CHARLESTON

Dr. and Mrs. J. W. Moore are spending the month of August in the mountains of Virginia.

Dr. and Mrs. G. C. Schoolfield are spending the month of August on their farm in Putnam County.

Dr. and Mrs. E. A. Davis are spending a few weks motoring in the East.

Miss Ann Bessler, Supt. of Nurses of the Kanawha Valley Hospital is visiting in Canada and the Great Lakes.

Dr. W. R. Hughey is spending his vacation on Elk River camping and fishing.

Dr. A. A. Shawkey is spending a few weeks in the East.

Dr. W. A. McMillan is spending the summer in Canada among his home folks.

Dr. H. L. Robertson of Charleston is visiting in Canada among old friends.

The medical profession of Charleston is glad to have the new State Health Commissioner, Dr. Henshaw in their midst.

Dr. John Millbee of Charleston has been arrested accused of producing a criminal absortion on a patient. The patient died in a few days from infection.

DINNER IN HONOR OF DR. P. L. GORDON

About forty physicians of Charleston sat down to a dinner on Friday July

22nd at the Kanawha Hotel arranged by the Secretary of the Kanawha Medical Society as a farewell to Dr. Patrick L. Gordon who is leaving to locate in Elizabeth City, North Carolina. Dr. J. E. Cannady acted as toastmaster and said that they came to praise Caesar not to bury him therefore no eulogies were to be spoken. Jokes and short talks were the order of the evening and at the close Dr. A. A. Shawkey presented Dr. Gordon a beautiful gold watch as a token of the esteem of his Colleagues.

Dr. Gordon has been in practice in Charleston for the past fifteen years and just before the war took up the speciality of eye, ear, nose, and throat and served in the war as a Captain in that line of work.

Dr. P. L. Gordon sustained a fracture of his right forearm on the eve of his departure for his new home in North Carolina. He was grooming his Ford when the accident occured. His son will do the driving on the trip.

Dr. Virgil E. McEldowney has recently located in Charleston.

The Kanawha Medical Society has had no meetings during the summer months but will resume the regular bi-monthly meetings the first Tuesday in September.

E. P. Henson.

Dr. Ben W. Bird and Dr. William W. Rixey have announced the formation of a partnership in the practice of Medicine and Surgery at Princeton.

Born to Dr. and Mrs. Walter W. Point of Charleston a son, Walter W. Point, III.

Married Dr. Charles Hutchinson, Martinsburg, W. Va., to Miss Nancy Reid of Chatham, Va.

A copy of January, 1921, West Va., Medical Journal is wanted. Please send same to Editor.

Dr. S. D. Hatfield until recently of Iaeger, W. Va., we are informed has moved to Kokomo, Ind., where he will specialize in pediatrics.

Died, John M. Boice, of Sistersville, August 2, from cerebral hemmorhage, aged 65. A graduate of the Medical College of Ohio, Cincinnati.

Dr. Robert Luddington Brown of Parkersburg was found dead in bed July 23, from heart disease. Dr. Brown was a graduate of Jefferson Medical College, Philadelphia, 1881; member of the West Va., Medical Association; served in the Spanish War; at one time a commander in the U. S. Navy. He was aged 67.

Nevada, last of all States, has passed a law to cooperate with the U. S. Public Health Service in the fight against venereal disease. And Congress has just cut out the appropriation for such cooperation after July 1 and has left all 48 States high and dry.

THE SECTION OF NEUROLOGY AND PSYCHIATRY, SOUTHERN MEDICAL ASSOCIATION

Has arranged a most instructive program for the meeting at Hot Springs, Ark., next November. An exhibit of specimens and charts is being collected; those who wish to send specimens should communicate with Dr. Paul V. Anderson, Westbrok Sanatorium, Richmond, Va., who is secreary of this new section and is arranging the exhibit. Those who wish to take part in the discussion of the papers should write Dr. Tom A Williams, 1746 K Street, Washington, D. C., chairman of this section.

WOMAN CONGRESSMAN OPPOSES SHEPPARD-TOWNER BILL

We understand that the only woman member of Congress, Miss Alice Robert-

son, of Oklahoma, is opposed to the Sheppard-Towner bill and she is appealing to the American women voters to use their influence to defeat it.

$1,000 FEE THE LIMIT

A policy has been recently adopted by the Johns Hopkins Medical School, forbidding a larger charge than $1,000 for professional services in any case treated at its hospital.

A new catalog of books and Journals published by the C. V. Mosby Co. of St. Louis has just been issued. It contains 96 pages well illustrated, describing the medical, nursing pharmaceutical and dental publications bearing the Mosby imprint. A copy of the catalog will be sent any physician postpaid upon request.

Fifteen million dollars and the merger of the Presbyterian Hospital in New York with the Columbia University College of Physicians and Surgeons, the beginning of a movement that will, it is predicted, make New York the world's greatest medical center, is the news that emanated from Baltimore on Independence Day. Dr. Wm. Walker Palmer, Associate Professor of Medicine in Johns Hopkins Medical Schol, who recently declined promotion to full professorship in that chair to succeed Dr. Wm. S. Thayer, resigned, will be dean of the enormous institution dedicated to medical science.

Dr. Robert E. Schlueter, St. Louis, has been appointed chairman of the Local Committee of Arrangements for the meeting of the American Medical Association at St. Louis in 1922. The board of trustees of the American Medical Association, who made the appointment, also announces that the dates of the 1922 meeting will be May 22-26. Headquaters for the local committee of arrangements have been established at 3525 Pine St., St. Louis. All communications for the attention of the committee should be addressed to that number.

Dr. Goff of Kenova is recovering from a serious illness at the C. and O. Hospital at Huntington.

The Nurses Examining Board of West Virginia will meet in the following cities, Wednesday October 12th, Wheeling, Charleston, Bluefield and Keyser. The examination fee is ten dollars. Two letters of reference, one from a physician, are required. Application may be made to the Secretary Miss Jessie A. Clarke, Ohio Valley General Hospital, Wheeling, W. Va.

MEDICINE

DIAPHRAGMATIC SPASMS IN ANIMALS PRODUCED WITH A STREPTOCOCCUS FROM EPIDEMIC HICCUP

Mindful of the extreme specificity of bacteria isolated from various foci of infection in other diseases, Edward C. Rosenow, Rochester, Minn. (*Journal* A. M. A., June 18, 1921) though that such areas might harbor the etiologic agent of epidemic hiccup. Three patients with prolonged uncontrollable hiccup have been studied from this standpoint. A suspension of the pus obtained from the tonsils was made in 2 c. c. of sal solution. Washings from the nasopharynx, and suspensions of pus from pyorrhea pockets were also studied. From these suspensions bloodagar plate and glucose-brain both cultures were made. Animals were inoculated directly with suspensions in salt solution, and with the cultures in glucose-brain broth. From 0.2 to 0.01 c.c. of the salt solution suspension, and

from 0.2 to 0.0001 c.c. of the culture in glucose-brain broth were injected intracerebrally into rabbits and monkeys. After a period of incubation lasting from one to seven days, depending largely on the size of the dose and the virulence of the strain, a remarkable train of symptoms developed, in which rythmic clonic spasms of the diaphragm were the striking feature. The organism isolated from the brain and spinal fluid of the animals that developed hiccup following injections of material from each of the three patients was a gram-positive, nonencapsulate diplococcus, which produced small nonadherent greenish colonies on blood-agar plates, and short chains in liquid mediums. Cultures from the blood and other tissues were usually sterile or contained few bacteria as compard with the brain and cord. The freshly isolated strains from the first and third patients were agglutinated by an anti-strptacoccus serum prepared with similar streptococcus isolated from a patient with lethargic encephalitis, but none were agglutinated by an antihemolytic ctreptococcus serum, by the anti-streptococcus serum prepared from one strain of the gren-producing streptococcus found so commonly in influenza, or by the type pneumococcus serum. Filtrates of the nasopharyngeal washings, of suspensions from the pus from tonsils and teeth of the patients, of emulsions of brain and cord from animals that died with typical symptoms, and of cultures which proved sterile by cultural methods, gave negative results following intracerebral inoculation. The close relationship between epidemic hiccup and epidemic lethargic encephatitis, noted clinically, was suggested not only by the similarity of these strains to those Rosenow has isolted in encephatilitis, but also by the results in the animal experiments. It was noted that after several animal passages fewer animals developed hiccup, and a larger proportion developed lethargic and other symptoms of encephalitis.

NERVE INJURIES DUE TO ERRORS IN TECHNIC IN MAKING INTRAVENOUS ARSPHENAMIN INJECTIONS

Accidents following the intravenous injection of arsphenamin are apparently uncommon, notwithstanding the frequency with which such injections are made. The nerve injuries discussed by Dean Lewis, Chicago (*Journal* A. M. A., June 18, 1921) emphasize the necessity for extreme care in making these injections; for, if the solution in injected into a nerve or the sheath surronding it, the nerve will be severely damaged. The subsequent sloughing of the soft tissues adjacent to it may render nerve repair difficult or unstisfactory. One patient had a median nerve paralysis which had followed within a few hours after an attempted intravenous injection of arsphenamin. A nerve resection was performed. There seemed to be some improvement in sensation, but no evidence of return of motion. In the second case there was an ulnar and median lesion. Lewis says that pain radiating into the fingers when the first few drops of the solution are injected should be a warning that the needle is not in the vein and that the solution is being injected either directly into a nerve or into the tissue surronding it.

DISORDERS OF PITUITARY GLAND

Harvey Cushing, Boston, used this article (*Journal* A. M. A., June 18, 1921) as the presidental address which he delivered before the Association for the Study of Internal Secretions, Boston, June 6, 1921. His concluding remarks

are: If this society wishes to play a useful role in furthering advances in endocrinology, it must, so far as possible, through the pages of its journal, keep such an exact alamanac that those pursuing the subject in the proper spirit may be able to avoid unfavorable winds, currents and counter currents. It must discountenance the exploitation of the few discoveries which have already been made by those who recklessly under full sail plow through a fog bank of therapeutics, their horns tooting. Surely nothing will discredit the subject in which we have a common interest so effectively as pseudoscientific reports which find their way from the medical press into advertising leaflets, where cleverly intermixed with abstracts from researches of actual value the administration of pluriglandular compounds is promiscuously advocated for a multitude of symptoms, real and fictitious. Endocrinology as a special subject, if it wishes to survive and come to be a factor in medical practice, must look out for the character of its clinical advance agents lest it come to be utterly discredited.

THE THERAPEUTIC VALUE OF TEA

In these days of prohibition a stimulant is required. If tea may be termed a stimulant, it may take the place of some of those strong liquors which are now banned. However, there are those who hold the view that tea is harmful and while it cheers but does not inebriate it injures digestion and with coffee should be classed among the harmful beverages. On the other hand, there are many who think that tea is distinctly beneficial and that in some caese it exerts a somewhat extradionarily favorable effect. In the removal of depression, for example, the virtues of tea have been highly lauded. Some time ago Haig drew attention to the influence of the morning cup of tea in dissipating the irritation and depression which some unfortunate individuals suffer from on rising. He ascribed such lowering of mental horizon to excess of uric acid in the blood and attributed the good effects of tea in removing these symptoms by the supposition that it, in common with other substances of a like nature, freed the blood of uric acid or at least tended to decrease the amount. Subsequent investigations do not appear to have corroborated this theory, and yet the fact remains that with many persons the morning cup of tea dispels mental miasmas as effectually as the sun the early dews. But Haig is only one of many who have noticed that tea acts like magic in overcoming morning irritability. Most of these authorities do not attempt to explain the reason for this phenomenon except by vaguely suggesting that tea exerts a stimulating effect o n the nervous system. They omit to state that the blood plays a foremost role in evoking nervous symptoms and that, as Haig has pointed out, it is essential to correct morbid blood states if it is desired to treat successfully functional nervous disorders.

In an editoral in the *Medical Press,* August 27, 1919, the nervous depression which affects so many civilized people and especially women upon rising is bluntly called morning toxemia. The writer of the editoral thinks it may be safely concluded that these early morning symptoms are related to the condition of the blood, and goes on to say that we may postulate among its multitudinous constituents the presence of two classes of substances having opposite effects upon the nervous system. When the former predominate there is a feeling of vigor and joyousness, while lassitude and de-

pression reign supreme when the latter are in the ascendant. Although in this article the cause is not suggested, it is stated that it may be reasonably supposed that nervine stimulants and nervine depressants exercise their influence through the medium of an organ situated in the optic thalamus.

It may be concluded that inspite of our lack of knowledge as to the exact manner in which tea acts in removing morning irritability and depression, it has a therapeutic value the extent of which has not been gauged. As bearing upon the subject, the writer recently had an experience of the seemingly beneficial effects of tea. So acute was the pain that unless narcotics were used she passed the night in misery. It was suggested that she try the effects of tea in the night, and on following the suggestion the pleasing result supervened that the pain was so greatly alleviated that no particular discomfort was felt. It would be making exaggerated assertions for the therapeutic action of tea to assert that such relief from pain was due to it. Of course the mental effect must also be taken into account.

THERAPEUTIC NOTES

Eczema in Infants.—Diluted citrine ointment, externally, and very small doses of arsenic internally, in the following forms, are recommended for the relief of this condition:

Ung. hydrarg. nitratis, drs. 3 to 5
Ung. aq. rosae, q.s. ad, oz. 1
M. Sig. Apply twice daily.
Liq. Potas. arsenitis, dr. 1
Aq. destil. q.s. ad. oz. 1
M. sig.: Two to eight drops once a day—Clinical Medicine.

Pyrexia of Dental Origin—Captain Herbert Wallis, R. A. M. C., discussing pyrexia of dental origin which he is inclined to believe is often due to pyorrhea, recommends the following mouth application, which should be used, along with thorough scaling and syringing the gums under pressure three times daily:

Vin. ipecac, ʒii.
Liq.arsen, ʒii.
Glycerin, ʒii.
Aquam, ad. ℥viii.

This mixture is issued in two-drachm bottles (to obviate self-poisoning).

Three drops should be used twice daily; apply one drop at a time on the toothbrush. The gums should be gently brushed with this mixture on the brush. —The Journal of Tropical Medicine and Hygiene.

Apomorphine in Alcoholic Insomnia. —Apomorphine is an excellent remedy for the insomnia of alcoholism according to Dr. Francis Hare (Brit. Med. Jour) In acute cases, 1-10 grain is recommended hypodermically, but care must be taken not to induce vomiting. In chronic conditions, 1-40 of a grain, given hypodermically, usually produces a short sleep. —Critic and Guide.

Eclampsia.—Trevor Berwyn Davies gives the following suggestions for the prevention of recurrence of the seizure in eclampsia: Absolute quite is essential Avoid manipulation and give sedatives. Of these morphine is by far the most important; ½ gr. should be given; repeat two-hourly ¼-1-3 gr. up to 2 gr. The use of chloroform has been largely given up owing to its toxic effects, and ether is the anesthetic of choice. This should be given before all manipulations. —The Clinical Journal.

Treatment of Diabetes.—Bullrich has been applying the Allen fasting method for two years, and in many cases has succeeded with it in banishing the sugar from the urine after failure of all other measures for more than ten years. He

has found it particularly useful in cases with serious complications, gangrene, etc., and in modifying impending acidosis. He says that it never failed him in his fifty cases.

Treatment of Sprue by Massive Doses of Sodium Bicarbonate.—Aldo Castellani finds that the administration in sprue of massive doses of sodium bicarbonate by mouth and intravenously, in conjunction with the usual dieteic measures, gives satisfactory results in a large number of cases, especially as regards the intestional symptoms of the malady.

Surgery

A NOTE ON POTT'S DISEASE AND ALBEE'S SPINAL GRAFT

J. Orthop. Surg., 1919, xvii, 401. Fifty consecutive cases of Pott's disease treated by Albee's operation are recorded.

The diagnosis of this condition is based on the usual symptoms, special attention being paid to the presence of muscular spasms resisting movement in all directions and the X-ray findings.

The purpose of the operation is to secure immobility of the affected vertebrae by an autoplastic graft from the tibia. If the spinous processes are fixed and the lateral articulations are sound, no movement of the bodies can take place.

The vertebral column is normally held in place only by the muscles. Albee's opertion is valuable in that it tends to give: (1) permanent immobility in the corrected position; (2) a greatly reduced period of confinement to bed; and (3) a safeguard against recrudescence of the disease. It should not be performed, however, upon children less thn 3 years of age nor upon very old persons. Neither is it of value in the treatment of the atlanto joint. Active cases should not be operated upon until the activity of the disease process has been abated by im mobilization on a frame. Sepsis or discharging sinuses about the field of operatoin are also contraindications. "Cold abscesses" are not opened by the operation.

Pre-operative treatment is begun immediately upon the detection of active Pott's disease and consists of: (I) splinting with a frame or cast to give complete rest; (2) reduction of reducible deformity very gradually when indicated; and (3) general treatment.

The author gives an exhaustive description of methods of splinting for different regions of the spine.

The Albee operation should be performed in a warm operating room and the surgeon should avoid hammering. The anaesthetic given should be ether, not chloroform. Great care should be used to prevent any movement of spine.

The postoperative treatment includes, first, the immediate treatment of shock. The first dressing should be done from four to ten days after the operation as indicated. The patient should be turned weekly in order to change the pads. The time at which the frame should be removed depends upon the location of the disease and other conditions, but is usually at the end of three months. The patient should then remain in bed for another month before sitting up. Soon thereafter he is able to walk but should wear the frame for a year.

PERSONAL EXPERIENCES IN THE OPERATIVE TREATMENT OF POTT'S DISEASE.: ARQUELLADA, A. M.

Mi experiencia personal en el tratamiento cruento dei mal vertebral de Pott. Pediat. espan., 1919, viii, 165.

The author has operated upon 46 cases of Pott's disease, 43 according to the method of Hibbs with the slight modifications suggested by Lugones, and 3 by Albee technique. The Hibbs method he considers much more simple and shorter than the Albee method.

There was one death whch occured three days after operation and was due to meningitis. In his case an abcess not revealed by radiography was opened during the operation. Of the other 42 patients operated upon by the Hibbs method, 8 could not be traced. In 6 cases the results were the same as those obtained by the use of a plaster cast alone. in the others recovery was complete. However, it is still too soon to warrant the assumption that the cure in these cases is definite as the earliest operation was performed only three years ago and some of them very recently.

An important fact to which the author desires to call attention is that in applying the Hibbs' method the deformity does not completely disappear and in some cases does not even diminish. In all cases the postoperative course was normal except that in 3 one of the apophyses operated upon was eliminated as a sequestrum.

The Hibbs method is indicated particularly in: (I) early cases with angular deformity, and (2) cases in which the vertebral lesions are associated with paraplegia.

The ages of the patients in the series reported varied from 2 to 12 years. The majority were at least 7 years old.

In one of the cases operated upon by the Albee method the tibial graft did not take. In the others it was implanted sucessfully but in these instances the author states that he is unable to deduce anything of value from the clinical or operative viewpoints.

As a general conclusion it is stated that no concrete deduction with regard to Pott's disease can be drawn from the operative methods. It is necessary to compare the results obtained in many series of cases and after a long period of time by different procedures, both operative and non-operative, including heliotherapy, before precise and definite conclusions can be drawn as to the value of, and indications for, any particular method of treatment.

UNUNITED FRACTURES OF THE HIP. HENDERSON, M. S.

This paper is based upon the study of 120 cases of ununited fractures of the neck of the femur. Sixty-eight of the patients were males, and 52, females. Twenty-six were operated upon, but in 94 cases no attempt was made to relieve the condition. In the majority of cases non-union resulted from incorrect diagnosis at the time of the accident, but often, for some justifiable reason no treatment had been given even when the diagnosis had been correct. In a few cases the measures used had been rather routine and not adequate in any sense.

Of the patients operted upon, 20 were males, and 6 females. The duration of the non-union varied from three months to three years. Nails or screws were used in 8 cases, and bone in 18. There were no deaths. Infection, which was slight, developed in only 2 cases. In 8 cases in which metal was used as a fixative, a good result was obtained in only I. Autogenous grafts may be obtained from various bones but the fibula is the most satisfactory.

The end results of the operation in 7 of the 26 cases are not known Ten operations were successful and 8 are known to be failures. One patient is still under observation, but the result in

this instance promises to be good. Thus good results, i. e., bony union and good function, were obtained in 38 per cent of the operations. Of the entire series of 120 patients coming for relief, however, only 10 (8.3 per cent.) were benefitted.

The author summarizes his conclusions as follows:

1. In the majority of cases non-union is due to the fact that the fracture was not recognized at the time of the accident and therefore was not treated. In other cases, in which the diagnosis is made correctly, the treatment is often faulty and weak. An impacted fracture must be kept impacted until it is united.

2 Comparatively few of the cases of ununited fractures of the hip are suitable for surgery.

3. Advanced age, poor general health, etc. are contra-indications to operation, but the chief contra-indication is absorption of the femoral neck. In the case of a patient 25 years of age the absorption of the neck of the femur may be so great five months after the accident that no measure will offer any hope of benefit.

4. In suitable cases any means that will freshen the fractured surfaces and maintain them in apposition is sufficient. For th latter purpose autogeneous bone pegs are the most satisfactory.

5. Bone from the fibula seems to be best for bone pegs as it is easily obtained and is never missed if it is removed 4 in. above the external malleolus.

GUNSHOT INJURY

C. H. Waters, Omaha (Journal A. M. A., Nov. 15 1919), reports a case of gunshot wound n a boy of 15, received when pulling a gun by the muzzle up a steep embankment. A large hole was torn in the left side of the thorax, but he was able to walk about 600 feet to the nearest house, and was seen by Waters about twenty minutes later. He was then in considerable shock and the entire stomach was found extruded through the hole in the lower part of the chest. It seemed intact, but was covered with dust and debris, fragments of clothing, etc. He was given 0.5 grain of morphin, and transported at once to the hospital, where everything was in readiness. Under light ether anesthesia the stomach was thoroughly washed with saline solution, and was replaced in the abdomen after reducing its size by compression. The diaphragm had a laceration about 3 inches long, involving the muscular portion. There was complete retraction of the lung, a portion of the lower lobe having been shot away. The heart had retracted to theright and was lying under the sternum. The inner extent of the thoracic wound was probably not more than one-half inch below and to the outer side of the normal apex situation. The chest cavity was carefully cleared of clots, fragments of ribs and clothing. Suture had been started at the inner angle of the diaphragm rent, when blood was discovered coming from the abdominal cavity. The suturing was quickly completed and the abdomen opened through a left rectus incision, and a quart or more of blood was found in the peritoneal cavity. The spleen was found completely torn in two and lacerated on its diaphragmatic surface. It was removed after double ligation of its pedicle, and a yard roll of 3-inch gauze was packed firmly in the subdiaphragmatic space to prevent oozing. The thoracic wound, which was 8 inches long and 2 inches wide, was then closed, the seventh, eight and ninth ribs having been shot away

aided in the collapse of the lung closure. Interrupted silkworm-gut sutures were used with considerable tension. Proctoclysis and hyperdermoclysis were given, and the patient rallied well. The gauze pack was removed after thirty-six hours, and the thoracic drainage the day following. The postoperative course was satisfactory for ten days, but later a suspicious dulness and rise of temperature appeared, and some pus was evacuated and some adhesions seperated, and drainage of the abscess cavity instituted. There was considerable sloughing of the chest wound which delayed healing. With appropriate exercises to prevent possible scoliosis, the boy made a good recovery. The roentgen ray at the end of two months showed almost complete lung expansion, and free movements of the diaphragm; also numerous shot in the chest wall, which gave no trouble.

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SIMPLE GOITRE—ITS PREVENTION AND TREATMENT

By Dr. John Wm. Moore,
Charleston, W. Va.

Read before W. Va., State Medical Association, Charleston, May 24-26 1921.

My interest in this condition is due to the good work done in this disease by Marine and Kimball in Ohio, and what I shall say will be largely from what they have reported. If what they say is true—and I think it is, it is certainly a matter that we as physicins should take up in our various communities.

First: How frequent is the disease and where it is found?

In the city of Akron, Ohio, 3872 school girls were examined, and of these 57% had simple goitre.

Among the school girls of Huntington W. Va., it is stated that 50% of the girls were affected.

Our school girls in Charleston were were examined last year, (about 2500) and 59.8% had simple goitre This is enough to show that the disease is very prevalent and something should be done for its cure.

As to where it is found? It seems to be in definite areas. Not only on this continnent but all over the world. The area we are interested in is the Great Lakes Basin—which as you know, embraces in part Ohio and West Virginia. In these areas we not only have human beings affected, but dogs and fish are likewise. It is said that most of the dogs of Cleveland, Ohio, have goitre. For some reason the female is affected more than the male.

Second: What do we term simple goitre? It is "big neck," the condition which has been called by various names at various times—such as, Endemic, epidemic, sporadic, fetal, goitre of adolescence, non-toxic, colloidal, cystic etc. In fact, it includes all cases of thyroid enlargement except—toxic goitre, exophthalmic goitre, thyroiditis and true thyroid neoplasm.

Third: What is simple goitre? This is a question which has been variously answered and many reasons have been

given for its cause. The chief theories centre around soil, water supply, microbic infection and organic toxins, the most likely being soil and water supply. Regardless of its cause, it is a deficiency disease evidenced by a non-inflammatory enlargement of the thyroid gland unassociated with marked functional disturbances, which tends to appear with greater frequency under poor hygienic conditions. Such conditions which make undue demand upon the function of the thyroid.

Fourth: What the nature of the deficiency bringing out the goitre is, is a question, but it seems to be true that it can be substituted for by supplying the body with small quantities of iodine salts, and this is the treatment.

Fifth: For the treatment in the schools, I will describe the way we are doing it in our schools in Charleston. First, we examine all the girls and make a record of their degree of goitre on their school card. This is done very quickly and with the aid of the school principals it takes but little time. We designate the degree of goire as No. 0—for no enlargement, No. 1 for a slight enlargement which can be felt but not seen. No. 2—moderate enlargement which can be easily seen, No. 3—for the large cystic goitres, Exop. for those showing signs of exophthalmos or hypersecretion. This examination was done first last November.

Next, the treatment consists of giving sodium iodide in solution to each child, whether they have goitre or not, for 10 days twice a year. We gave it last year in November and are now giving it in the schools. The dose which has been settled upon it 3 grains once a day to children from 6 to 15 years old, and 6 grains from 15 years up. It has been found best to put this up in a solution—3 grains to the teaspoonful, and the teachers see that the children get it once a day for ten days, twice per year. We have had very little complaint of any diturbance to the intestinal tract or rash.

Sixth: Now as to results, I will have to quote Marine and Kimball again and will give my figures from a recent examination of the Charleston Schools. I do not think that these will be very accurate and do not hope for the best results from the fact that only one dose has been given. The figures of Marine and Kimball show that none of the girls who had no goitre at the time of examination and took the treatment, developed goitre, and that the girls who had no goitre and did not take the treatment—26% developed slight enlargements; of the girls who had small goitres —33½% disappeared under treatment. Our statistics in Charleston show that practically no girls who had no goitre after taking one treatment for ten days —developed goitre, in the No. 2 cases, there was a diminution of 20%, No. 3 40%.

Seventh: I believe this is a way to eradicate goitre and that the only way to do it is to do it through the schools, as this is the best way to reach the greatest number of children.

It is not an easy matter to get the parents to allow their children to take the treatment, but if it is properly handled —getting the endorsement of the school board and doctors—it can be done very effectually.

Eight: I have not said anything about the sanitary and hygienic treatment, it goes without saying that this should be seen to as anything which lowers the general vitality of the child will make them more liable to the disease.

SECRETARY'S NOTE

Just as Marine and Kimball of Ohio interested Dr. Moore in trying to prevent goitre by the use of iodides so Dr. Moore interested us to such an extent that we purpose trying them out in our local communiies. All of us have been impressed with the frequency of goitres, their baneful effects and unsightly appearance and it would be a God-send indeed if we could live up to our principle of preventing disease by preventing them or even causing them to be diminished. This paper was short, spicy and direct to the point and created as much interest and discussion as any paper read before the Association. Our distinguished visitors were much interested in this paper.

DEDUCTIONS BASED ON A RECENT SERIES OF OPERATIONS FOR GOITRE

By STUART MCGUIRE, M. D.
Richmond, Va.

Read Before State Medical Association of West Virginia at its session in Charleston, May 24, 1921.

The essential cause of goitre is unknown, although it is thought that eventually it will be proved to be due either to the direct infection of the thyroid with bacteria, or to the indirect action in the thyroid of toxins from infection in other regions, such as the teeth or tonsils. There is ground for the belief that the activating agent is water-borne.

Goitre is much more common in women than in men, and this is believed to be due to the fact that the thyroid is largely a sex gland, and disturbances or diseases of the organs of reproduction are more frequent in the female than in the male.

The frequency of goitre varies greatly in different sections of the country. The rigid inspection of large numbers of men made during the recent war gave interesting and reliable statistics. Figures at the Surgeon General's Office, based on the result of the examination of the first million men enlisted in the United States Army, showed that simple goitre was present in 14.79% of the recruits from Washington, in 1.39% from West Virginia and in .75% from Virginia; and that exophthalmic goitre was present. in 2.07% from Washington; in 1.32% from West Virginia and in .05% from Virginia.

With reference to the relative frequency of simple goitre in the various States, Washington stood first, West Virginia seventeenth and Virginia twenty-first. With respect to exophthalmic goitre Washington stood first, West Virginia twenty-sixth and Virginia forty-first.

From the standpoint of the clinician, goitres may be divided in four types, the adolescent, the simple, the toxic-adenoma, and the exophthalmic.

I—Adolescent goitres are seen in young girls from the age of 14 to 20 years. The gland is symmetrically enlarged and increases in size with each menstrual period. The patient is usually nervous and often obsessed with morbid fears, but the symptoms attributed to the goitre are due to hysteria or other causes. Every surgeon has many cases of the adolescent type brought to his office. If he is competent and conscientious, he tells the patient that the condition is not a serious one and advises a life free from excitement or over exertion, an abundance of pure drinking

water and perhaps the administration of iodine. Such cases usually get well with or without treatment.

II—Simple goitres are symmetrical in shape if due to a general parenchymatous hypertrophy, or asymmetrical if due to a cyst or adenoma. They do not produce constitutional disturbances, but simply give rise to a deformity of the neck and mechanical symptoms due to pressure. Some of these cases may become toxic or in rare instances undergo malignant degeneration. Operations for simple goitre are indicated to correct deformity, to relive presure, and to prevent the possibility of the development of toxic symptoms or malignant disease.

III—Toxic goitres or toxic adenoma develop in patients who usually have had a simple adenomatous goitre for years. These patients, in addition to the asymmetrical enlargement of their thyroid, have nervousness, tachycardia, coarse tremors of the fingers and marked loss of weight and strength. Their basal metabolism is preceptibly increased. Unlike the exophthalmic type they have no marked changes in the eyes. Owing to the chronicity of the disease there is apt to develop secondary degenerative changes in certain vital organs such as the heart, liver and kidneys. Operations for toxic adenoma are urgently indicated. If done early, they are safe, as post operative reaction is not usually severe and the general condition of the patient is good. If done late, operations are attended by great risk of life, and patients who recover are not usually restored to health, because it is impossible to cure the organic changes that have taken place in the heart, kidneys or other important viscera.

IV—Exopthalmic goitres are due to a hyperplasia of the essential cells of the thyroid and are usually symmetrical in shape. The histological section of an exophthalmic goitre bears the same resemblance to the normal gland that a section of a lactating breast bears to the non-lactating organ. The symptoms of an exaphthalmic goitre are not those of local pressure, but of constitutional intoxication from excessive thyroid secretion. The symptom-complex is a familiar one; nervousness, tremors, tachcardia, exopthalmos and feverish mental activity. The basal metabolic rate of these patients is markedly increased. The chief diagnostic difference between exophthalmic goitre and toxic goitre are that the exophthalmic type is usually seen in younger patients, that the symptoms develop more quickly and with greater intensity, and that there is the presence of the characteristic eye changes which are absent in the oxic variety.

There is no difference in the profession as to the treatment of the first three types of goitre. Adolescent goitres should be treated by medical and hygienic measures. Simple goitres should be operated on if they cause deformity or give rise to pressure symptoms, the patient often being the best judge as to when the disfigurement or discomfort they produce are sufficient to justify an operation. Toxic goitres or toxic adenoma should be removed as soon as discovered, as they do not tend to spontaneous cure or yield to non-operative treatment, and delay leads to incurable structural changes in the heart, kidneys and other vital organs. When it comes to the treatment of the fourth type, or exophthalmic goitre, however, there is a sharp difference of opinion as to the proper procedure to be followed. The different views of the profession will be presented later.

With this introduction I will now summarize the report of 110 cases of goitre that have been operated on at St. Luke's Hospital since it re-opened after the war, a period of a little less than two years. Of these patients, 102 were women who averaged 35 years of age, and 8 were men who averaged 42 years of age. The oldest patient was 69 and the youngest 15. There were 63 cases of simple goitre, 25 cases of toxic adenoma and 22 cases of exophthalmic goitre. The average age of the patients with exophthalmic goitre was 29 years, and the average duration of the goitre was 11 5-7 months. One patient was refused operation because of acute cardiac decompensation, and died several weeks after leaving the hospital. With this single exception every patient who needed relief was operated on, although many of them were serious risks. No preliminary ligations of arteries or injections with hot water or quinine and urea were practiced. The operations consisted of enucleations or partial lobectomies under a general anesthetic, usually straight ether, although occasionally gas-oxygen with ether sequence was employed. Only one operation was done on each patient and no operation was left incomplete after it was begun. There was one death in the 110 cases, or a mortality of less than 1%.

The foregoing statement is made at this part of the paper, because I wish to present certain views on the treatment of hyperthyroidism which differ from those held by other surgeons of greater reputation and larger experience and I would not have the courage to do so unless I was able to justify my opinions by my results.

In reviewing the litature of the treatment of hyperthyroidism one is struck by the fact that honest and experienced men hold divergent views, and that the same man often changes an apparently fixed opinion and attaches little importance to what he at one time considered an essential feature in the treatment of the disease. Until recently it has been impossible to analyse the results reported by different clinicians in series of cases treated by different methods, and to determine what influence was exercised by individual skill and what by the procedures employed. The recent introduction of the metabolic test, however, bids fair to settle many questions under discussion.

It has been demonstrated that the thyroid regulates the general metabolism of the body and than an increase or decrease of thyroid activity is accurately shown by corresponding changes in the patient's metabolic rate. Hence by determining the degree of metabolism we now have a scientific means by which we can estimate thyroid activity in an individual case and can tabulate mathematically the effect of the various forms of treatment that are advocated for its abnormalities.

Healthy individuals have been found to have approximately the same metabolic rate. There is a normal variation with age and sex and an abnormal variation in disease. The rate is low at birth, is high at puberty and decreases with advancing years. It is higher in the male than in the female. It is increased by physiological exercise and markedly retarded or accelerated in certain diseases. In cretinism, which is characterized by hypothyroidism, it is often 40% below normal, while in toxic or exophthalmic goitre, which are characterized by hyperthyroidism, it is frequently 75% above normal.

Basal metabolism has to be calculated on the basis of the surface area of the body and in health it has been found to be apphoximately 29 calories per hour for each square metre. The determination of the surface area of the human body was at first difficult but has now been made quick and easy by the "Height-Weight Formula" of Du Boise, who has also published a chart of metabolism for both sexes at all ages.

The total amount of heat production in a given time by an animal or individual was formerly determined by what is known as the direct method which consisted in placing the subject in a cabinet equipped with an elaborate apparatus which recorded the number of calories thrown off, but it has been shown that the same result can be arrived at by the indirect method which consists in the measurement of oxygen consumption, as this is a more or less accurate index of heat production. Benedict has invented a portable apparatus to estimate metabolic rate by the method last mentioned. It is simple, inexpensive and satisfactorily meets the needs of small clinics and hospitals. Thus, to the microscope, the stethoscope, the thermometer and the sphygmomanometer there has ben added another diagnostic means of accurate precision based on the development of modern scientific knowledge.

There has not yet been sufficient experimentation or practical experience with basal metabolism to determine its exact clinical value. Like the thermometer it promises to be a most valuable agent but also like the thermometer its record must be considered together with the patient's clinical sympoms. A patient with typhoid fever who has a low temperature will not necessarily live. Likewise, a patient with hyperthyroidism may have a high metabolic rate and not be as seriously sick as another with a low rate who has structural changes in the heart, liver or kidneys.

The metabolic rate of a patient is a definite index of the degree of hyperthyroidism present and therefore very valuable in making a diagnosis, especially in the early and late stages of the disease. The onset of hyperthyroidism is usually so gradual that it is difficult to recognize it is in its incipiency and here the metabolic rate will clearly differentiate it from hysteria, neurasthenic, tuberculosis and other conditions with which it may be confused. Again, in the late states there develop symptoms due to degeneration of the heart, liver or kidneys and it is difficult to say how much the patient suffers from hyperthyroidism and how much from damage to the vital organs. Here also a determination of basal metabolism will be valuable not only for diagnosis but for prognosis as well.

In my practice I employ the method of Bennett, or the estimation of oxygen consumption, and the method of King, or the estimation of carbon dioxide elimination, using both on each patient as a check one against the other. I find the results of the two methods practically the same, the calculations rarely showing a difference of more than five points. I have found that the basal metabolic rate corresponds pretty closely with the patient's history and symptoms and with the pathological findings of the specimen removed, still I have not come to rely on it as a certain criterion of operability. This must be decided only after taking every factor into consideration. I have come to rely on basal metabolism, first in making a differential diagnosis in an early case, second in estimating the degree of hyperthyroidism in a late case where it is difficult to determine whether

the symptoms are due to the goitre or to degenerative changes in other vital organs, and third in assigning a relative value to the different forms of treatment advised for the relief or cure of hyperthyroidism. Means and Aub have done pioneer work in this line of investigation, but much yet remains to be learned. Sooner or later what Price termed "fuss, feathers and foolishness" and what Mayo termed "the side show" will be discarded and the treatment of diseases of the thyroid will be standardized as have the diseases of the appendix, gall bladder and other organs.

1—Removal of Focal Infection. While we do not know much about the etiology of exophthalmic goitre, it is a fact that the condition frequently follows some acute disease and is maintained by a local focus of infection. Before beginning the systematic treatment of any case the tonsils and teeth should be examined and other possible sources of poison such as intestinal stasis should be determined, and if any diseased condition is discovered it should be corrected. Recently an early but very acute case of exophthalmic goitre was brougght to me. She had lost fifty pounds in weight, her pulse varied from 140 to 160, her metabolic rate was 87 per cent and she was delirious a greater part of the time. Examination showed abcesses at the roots of four teeth. The teeth were extracted and her symptoms immediately began to improve. Without further treatment except rest and proper feeding she made a rapid recovery, and is now apparently restored to health.

2—Rest. The first and most essential factor in the medical treatment of hyperthyroidism is rest. It should be absolute and complete and must be mental as well as physical. It is useless to try to secure it at home. The patient should be placed in a hospital where she can be under proper control. Means and Aub studied the effect of rest on a group of cases. These patients had an average metabolism of +81 per cent and average metabolism of +81 per cent and after from one to thre weeks the same group had an average of +67 per cent. In a few of the more toxic cases the curve rose in spite of rest. There was no case in the series whose metabolism was brought to normal by rest alone After a time a level is usually reached and rest alone will not cause a further drop.

3—An ice bag over the heart seems to slow its rate and quiet its tumultousness, and its application serves to keep the patient more quiet in bed as she refrains from turning and twisting for fear of displacing it.

4—Water should be given in abundance in order to eliminate toxic products from the system by way of the emunctories. Distilled water, while not as palatable, will be found to be more efficient. This is greatly due to its greater solvent qualities, but more largely due to the fact that the patient thinks it has special merit, and will drink it in larger quantities. Every hospital should have an apparatus to supply distilled water for this class of patients. If no still is available, then the water can be obtained from a local artificial ice plant.

5—The diet of these patients is important. The machinery of their system is being driven under forced draft, and they need fuel to save the consumption of their own tissues. Food should be given every three hours, and in as large quantities as possible without creating digestive disturbances. Ochsner states the diet should contain no red meat or animal broths but consist principally of

milk, butter milk, cream, butter, bread, cereals, fresh vegetables and cooked fruit. Grape juice and other drinks prepared from fruit will be found palatable and beneficial. Tea, coffee, alcohol and tobacco should of course be avoided.

6—The administration of various drugs with a view to lessen metabolism has been advocated. Of these hydrobromate of quinine with ergotine, glycocholate of soda and pancreatic extract have the greater number of advocates. Means and Aub have tested the action of hydrobromate of quinine on a group of patients and found that it had no apparent effect on the metabolic rate of the cases. While it is only of historic interest it may be mentioned that the effect of Beebe's Serum on metabolism was also tested and found negative. The administration of digitalis is recommended by Willius, not for its effect on metabolism, but because of its influence on the heart. It is important to have a potent preparation and to prescribe it in sufficiently large doses to obtain the desired result. As the drug does not have a definite action for 24 or 36 hours it is useless to give it hypodermically. If it causes nausea by mouth it may be administered by rectum.

7—The use of X-ray has long been advocated in these cases and more recently the application of radium has been recommended, the theory being that a sclerosis is produced which lessens glandular activity. The relative merits of X-ray and radium have not been determined, but it seems that the choice is largely a question of the experience of the operator and the convenience of the patient. Means and Aub tested the effect of X-ray on a group of cases. These patients had an average metabolic rate of +63 per cent. After one or two treatments at intervals of one month, there was a reduction of +52 percent. After four or five treatments there was a reduction to +40 pe rcent, and after two or three years' treatment there was a reduction to +13 percent. and the patients were able to lead normal lives. The advantages claimed for the X-ray method of treatment are that it avoids an operation and is attended by less danger to life. The disadvantages are the increased length of invalidism, the greater difficulty of operating if surgery is ultimately necessary, the possibility of shrinkage of tissues of the neck, the danger of myxedema and of X-ray burns and the liability of treating colloid and cystic goitres which are not benefited.

8—The injection of boiling water or a solution of quinine and urea into the body of the thyroid has been advised in cases of beginning hyperthyroidism not severe enough to justify operation and as a preparatory measure to partial thyroidectomy in patients too ill to warrant any form of immediate operative procedure. The theory on which this practice is based is that the destruction of glandular cells and the obstruction of blood vessels will cut down the output of thyroid secretion. The method has many enthusiastice advocates who report good results. It is not without immediate or remote disadvantages and dangers. Some patients are so sick that even this apparently simple procedure will cause an acute and perhaps a fatal hyperthyroidism, others will not be benefited and a subsequent surgical operation will be made difficult by the adhesions it has caused, and finally the irritation may eventually result in the development of cancer. Balfour reports 103 cases of malignant disease of the thyroid and it is a significant fact that 7 gave history of having been treated by the injection method.

9—Surgery is generally conceded at the present time to be the safest, surest and most satisfactory treatment of hyperthyroidism. The practice of destroying a portion of a gland in order to lessen its physiological activity is certainly illogical, and only defensible on the ground that we are confronted with a condition and not a theory. Still it is a fact that while patients are benefited by rest and drugs and sometimes either make spontaneous recoveries or are cured by repeated and long continued X-ray or radium treatment, she is given her best chance by an operation.

The operations done for hyperthyroidism are ligations and partial thyroidectomies. The advocates of ligations state that while the benefits which follow the operation are marked, they are not permanent, and that ligations should only be employed either as a test of a patient's reaction to trauma in cases where there is a doubt of the individual's ability to stand a thyroidectomy, or as a means to get a patient in condition for a more radical operation when it is obvious that at the time a thyroidectomy could not be done without hazzard. Observations in the various surgical clinics of the country show that the number of ligations being done is steadily diminishing and personally I have given them up altogether. The favorable results attributed to ligations cannot be explained on an anatomical or physiological basis. It is said that all the blood in the body passes through the thyroid once every hour, and every operator knows that trying one or more of the principal arteries does not materially diminish its vascularity. The effects of ligations are in my opinion largely due to psychic influences and to the subsequent treatment of the patient and the same results can be secured by safer and less heroic means. In mild cases ligations are unnecessary, and in severe cases they are as dangerous as a lobectomy or partial thyroidectomy. The greatest danger of an operation for exopthalmic goitre is acute post operative hyperthyroidism and this is caused not by the amount of the gland taken out, but by the amount of the gland left in. In the early days of my work I had some bad results because I was timid and did not remove enough of the thyroid. With increasing confidence I have taken out more and more and have secured better immediate results and have seen no remotebad consequences. I now do a double partial lobectomy preserving only a small portion of the gland attached to the posterior capsule on either side This leaves sufficient thyroid tissue to carry on the normal functions of the body, protects the recurrent laryngeal nerve and other important structures from injury, and gives good cosmetic results as it does not destroy the symmetry of the neck.

The results of partial thyroidectomy are prompt and permanent. If the operation does not effect a satisfactory cure it is because either not enough of the gland has been removed or that the operation has been delayed until the patient's symptoms are no longer due to hyperthyroidism alone, but to organic changes in the vital organs as well.

I do not wish it to be inferred that I do a radical operation for toxic or exophthalmic goitre without careful preliminary study and often prolonged treatment of each individual case. The patients are put to bed, given absolute physicial and mental rest, an ice bag is applied to the chest and water and food are properly regulated. Some are treated with X-ray by means of the Coolidge tube, others are given a course

of digitalis. The fluctuations of the disease are carefully watched and the operation fixed for the most propitious time. Every effort is made to inspire the patient with confidence and to relieve apprehension and fears. In a few cases "the inhalation treatment" suggested by Crile is employed, thus saving the patient knowledge of the day and hour of the surgical ordeal.

SECRETARY'S NOTE

Prolonged applause: Paper listened to with keen interest, the essayist driving home his points with "easy" words, short sentences and personal magnetism with telling effect. You could tell at once that he was master of his subject. His classification, method of diagnosis, manner of treatment and his conclusions were praised by Drs. Frank, Sherrill, and others who discussed the paper. The percentages of simple and exophthalmic goitre are found by the Surgeon General's office of the first million men examined in West Virginia piqued our interest very much.

EDITORS NOTE

Bob you made a mistake. There were not a million examined in West Virginia. It is a question if there are that many men here.

But it is a wonderful exposition of this very interesting and important subject.

THYROTOXICOSIS

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In the year 1786 a country doctor practicing at Bath, wrote an account of eight cases of "enlargement of the thyroid gland in connection with enlargement and palpitation of the heart." In the first cases reported exophthalmos was a part of the clinical syndrome. That he did not think these observations of sufficient importance to publish, now seems rather significant, for when a little came out in London in 1825, entitled *Collections from the Posthumus Writings of the Late Caleb Hilliere Parry*, the medical profession read for the first time a record of the symptoms arising from thyrotoxicosis. Some years later Graves and von Basedow made more detailed expositions of the condition which has since come to be associated with their names; but none of these three observers realized that the symptoms they described were due to excessive secretion on the part of the thyroid gland.

The prevalence of goitre, particularly in certain parts of Europe, led to a very lively interest in the etiology of that disease, so that the study and increases of information regarding it made rapid strides. Yet today we are still a long way from a complete knowledge of the exact functions of the thyroid, and its effects—both good and ill—on the general physicial economy.

Etiology: Indications of hyperthyroidism often make their appearance after such infectious diseases as scarlet fever or acute arthritis; they are very likely to be in evidence at the different epochs of sexuel development, puberty, pregnancy, or the menopause; women are five times more prone to thyroid disturbances than men, and obstetricians and gynecologists are each year giving more and more attention to the relation between hyperthyroidism and the conditions which they are called upon to treat. There is also a prevalent, but on the whole not very active founded belief

that thyrotoxicosis may become active after a severe mental disturbance, such as grief, fright, or other physic shock.

Crile whose experience with goitre covers the operation of more than two thousand cases, states that the excitants of increased metabolism lead to greater thyroid activity, and also cause an increased output of epinephrin. Moreover the symptoms of exophthalmic goitre are identical with those produced by the combined administration of epinephrin and of thyroid extract. He has therefore, come to believe that undue activity of the suprarenals is co-existent with hyperthyroidism in the production of exophthalmic goiter. Neither the suprarenal nor the thyroid has any direct communication with the external or internal environment except through the nervous system and through hormones. Both the thyroid and the suprarenals respond adaptively to changes in the internal and external environment through the mediation of the mediation of the nervous system and hormones; therefore, the kinetic drive may be modified in four different ways; by eliminating or diminishing the external and internal driving stimuli; by depressing the sensitiveness of the nervous system, by diminishing the amount of thyroid tissue; and probably by diminishing the amount of suprarenal tissue as well.

If the thyroid activity is depressed by the ligation of arteries and nerves, by destructive injections, or by excision, then the activity of the nervous system at once slows down, because the fabrication and output of the specialized activation products is diminished, and in consequence action currents will also be diminished.

5 Falta is inclined to share Crile's views on the possible part taken by some other ductless gland in the production of exophthalmic goiter, but states that the fact must be recognized that "the cause of Basedow's disease has yet to be explained. Most of the symptoms can be referred to by hyperthyroidism; the cause of the hyperthyroidism is possibly conditioned centrally, and thus perhaps a series of symptoms and alterations in the functions of other ductless glands are coordinate with the hyperthyroidism."

The effect of thyroid secretion on the central nervous system, the close connection of this system with the thyroid is instanced in the association of epilepsy with thyroid disease, especially exophthalmic goiter. Kocher (6) regards the blood picture as being one of the most characteristic findings in the symptomatology of Basedow's disease, and lays stress upon the importance of minute blood examination in obscure cases where the diagnosis lies between myxedema and Basedow's disease. Out of his 155 cases of mxedema only twenty-six failed to show a leukopenia of a much greater degree than that evident in exophthalmos As myxedema is a rather rare condition in this country, this question of careful scrutiny of the blood picture has perhaps not received the attention it deserves.

Pathology: At postmortem, where hyperthyroidism has been manifest during life, persistence of the thymus gland has been an almost universal finding as an accompaniment to the enlarged thyroid. At the onset of the disease the thyroid gland is usually vascular and soft, but when the condition has been persistent for any great length of time, it has been observed that it tends to lose this consistency becoming firmer and less vascular. Under the microscope the amount of secreting tissue will be seen

to have augmented, the normal contour of the cells giving place to a branching stellate shape. The enlarged thymus appears to bear a very definite and persistent relationship to the condition, but we have yet to find a positive explanation of just what this relationship may be.

Symptoms: The number and severity of the symptoms are more or less dependent upon (1) the amount of hypesrsecretion, (2) the amount of this hypersecretion which is absorbed, (3) the ability of the organism to neutralize or detoxicate the excessive secretion, and (4) upon the stability or instability of the venous system.

Interference with the thyroid function produces alterations in the skin and cutaneous pigmentation; depression of the circulation as evidenced by small slow pulse, subnormal temperature, cynaosis of the extremities, cardiac dyspnea on exertion, and the tendency to syncope, muscular rigidity, epiletiform convulsions; changes in metabolism, especially in the urinary system, the quantity of urine decreasing together with the output of urea and nitrogen, and the specific gravity being lowered; blood changes—these include marked decreases in the erythrocytes ad a corresponding reduction in the hemoglobin; there are also fewer leukocytes, the viscosity of the blood is increased; interference with the bodily growth in height is shown by the persistence of the epiphyseal lines.

Thyrotoxicosis may be exogenous or endogenous, due to substances from without or from deleterious matter within the organism. These substances may be normal metabolic products or the result of pathological processes. As thyroid activity is greatest between the twentieh and the forty-fifth year, thyrotoxicosis usually develops during this period of greatest functional activity. Each disease may present a varying clinical picture, but disturbances of the thyroid offer a uniform series of symptoms.

Tachycardia is the most prominent circulatory symptom, the pulse is frequent, quick and of high tension. The increase velosity of the blood produces murmurs, congestion is not uncommon, and nosebleed quite frequent. The heart sounds are often so loud that they can be heard at a distance of sevehal feet away. In well developed cases there is a marked pulsation of the arteries of the thyroid gland, and even a pulsatory shaking of the head may occur when the condition is very grave. Falta explains the tachycardia as being due to irritation of the accelerator, and irritation of the vaso-dilator as causing peripheral relaxation. He is also of the opinion that increases in the blood pressure in the vessels of the thyroid gland is due to irritation at the root of the depressor nerve. This would seem to be an adequate explanation of the cause of the cardio-vascular symptoms.

Mackenzie (9) remarks that it has always seemed strange to him that the size of the thyroid gland does not seem to bear any constant relation to the severity of the illness. Some of the cases with a much enlarged thyroid are not of a severe type, while in others where the thyroid is hardly palpable the condition is extremely grave. He has seen several cases of exophthalmic goiter where there was marked nervousnss, wasting, tachycardia and extreme exophthalmos, without any thyroid enlargement whatsoever. Most other writers, however, agree that in all conditions resulting from thyrotoxicosis, the thyroid gland is sure to be enlarged. But they also agree that even when the enlarge-

ment of the gland is very trifling it may be highly toxic.

The ocular symptoms are usually pronounced. Bilateral exophthalmos is more common, but if it is unilateral the pupil of the protuding eye will be greatly dilated. If the hyperthyroidism becomes chronic, the protusion of the eyeball will be permanent. Very often there is retraction of the upper lid, so that it fails to follow if the vision is cast slowly downward, the white sclera thus beoming visible at the upper border of the cornea constituting Von Graefe's sign in exophthalmic goiter. There is very often weakness of convergence, tremor of the upper eyelid, and involuntary winking.

The rise in basal metabolism is not only a constant feature but is one of the most striking and characteristics manifestations of thyroid overactivity. (10) In hyperthyroidism the toxicity as judged clinically, runs very nearly parallel with the rise in basal metabolism so that this rise in basal metabolism furnishes an accurate index of the degree of toxicity present, practically amounting to a functional test of the thyroid gland. Not infrequently diabetes and hyperthyroidism have been found to occur together.

Other noticeable symptoms are falling of the hair from the eye-brows, armpits, and pubes; excessive sweating, especially of the palms and axillae; an extremely brittle condition of the nails and teeth; and a pecular wax-like pallor of the skin. As the disease progresses the patient very often becomes markedly emaciated.

Treatment: There is a wide variation in the views held by different writers on the most desirable treatment of hyperthyroidism; particularly as to whether or not operation is imperative or even generally desirable. Solis-Cohen (11) makes a vigorous plea for the more general application of medicinal and therapeutic measures before resorting to surgery. Rest, in his opinion, is the most important factor of all, especially in cases which are so far advanced as to exhibit a thyroid enlargement that may properly be dominated as goitre, or in which, although goitre may be slight or absent, there is a decided tendency to loss of flesh and strength. Relief from worry and other forms of mental disturbance, as well as from eyestrain and other sources of reflex irritation, forms an integral portion of the rest treatment. He advocates diet containing a minimum of sugar and starch but an abundance of green vegetables and fresh fruits. Milk and eggs should be used with moderation; the gain which is made on a beef diet is not usually so rapid, but it is more lasting and actually beneficial. Hydrotherapy, carefully adjusted to the requirements of the individual patient, is of great benefit. Active elimination must be maintained. The application of ice-water coils over the heart and cervical spine, the administration of trustworthy preparations of well-chosen organic extracts, and various forms of auxilliary medication—with the use of certain mechanical manipulations, topical applications and electrical treatment, will increase the number of recoveries to 80 percent or even more.

Mackenzie strongly advocates the use of the *X*-ray, which he has found of great benefit in slowing the pulse, diminishing the nervousness, and relieving the often-present tremor. Radium is now being used extensively, and the reports recently published offer a far more encouraging prognosis that it has ever heretofore been possible to give to the victims of hyperthyroidism. Radiation

properly carried out is at present the method of choice in many of the medical centers throughout the world.

Musser (13) is of the opinion that endemic goitre should not be treated surgically until proper general treatment has been employed for a considerable period. If relapses continue to occur, and rigid adherence to the therapeutic regimen does not result in marked —even if slow—improvement, then surgery become the only resource. But better cooperation between the surgeon and the internist is needed before we can expect a great reduction in the present all-to-high rate of mortality, and a complete disappearance of the great numbrs of chronic invalids who are at present the victims of thyroxtoxicosis.

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(13) Musser, J. H. Problems in treatment of exophthalmic goitre; Am. J. Med. Sc. cxliii, 810, June 1912.

SECRETARY'S NOTE

Another interesting paper on goitre. The history of the disease, etiology, pathology and symptoms as given by Dr. Buford showed careful thought and study and covered the entire subject and he emphasized the well known fact that all physicians and surgeons do not agree on the treatment and made a plea for better understanding between the internist and surgeon on treatment. Crile's theory of the likeness of exophthalmic goitre to the symptoms caused by the administration of ephiniphin and thyroid extract was interesting and he regards the blood picture as emphasized by Kocher very important and too much neglected in America.

EDITOR'S NOTE

We are prone to forget the advice of men who were Past Masters in the art of medicine. Especially is this true if they have gone on.

The late Dr. Forcheimer was one of these. While, unfortunately, I was not his student still I was his admirer and he my friend.

In a number of patients where I have been unable to find what was back of this trouble even with the assistance of capable specialists in throat work and with trouble with the teeth and after consultation with the best of "Internists" available, Dr. Forcheimer's empirical quinine treatment has produced results.

We should cure sick patients.

THE THYMUS

By DR. S. J. MORRIS,
Morgantown, W. Va.

Read Before W. Va. State Med., Assc., Charleston, May 24-26, 1921.

The thymus gland in man is a transitory organ of extra-uterine life. It develops as a paired organ from the endodermal lining of the third and fourth pair of gill clefts. His in his embory of the fifth week describes it as an open pouch communicating with the foregut or pharynx. This connection is soon lost and the sac becomes free from its moorings to the gill clefts and shifts down into the neck and thorax. The lumen of this cylindrical sac remains open until about the twelth week after which it becomes a solid cord of cells with numerous buds coming off it. The thymus does not long remain a strictly endothelial structure for blood vessels push in from the mesoderm. Round cells probably of mesodermic origin push into the epithelial cords while others gather around to form investing masses which soon form the great bulk of the gland. It might be of interest to know that the parathyroids develop as outgrowths from the third and fourth gill arches also.

ANATOMY: The fully formed thymus makes an organ of considerable size lying in the anterior mediastinum almost in the midline. It consists in most cases of two lobes which are more or less united by vascular connective tissue from which offsheots are sent into the substance of the gland. The upper portion of the thymus almost touches the thyroid gland to which it is attached by a cord-like mass of connective tissue containing the thymic branch of the inferior thyroid artery and vein. Downward the thymus extends upon the pericardium as low as the third or fourth rib. It is in relation with the sterum in front, behind with the arch of the aorta and its branches and the innomnate vein which lies in a groove on the under surface of the thymus. In the cervical region it is covered over by the sternohyoid and sternothyroid muscles and lies upon the trachea. You will notice from this that the thymus is situated partly in the neck and partly in the thoriac region. In the thoraic region it is spread out over the heart in fingerlike processes. The blood supply is derived from the inferior thyroid and mediastenal branches of the internal mammary arteries. On the dorsal surface it is penetrated by minute branches of the pericardial arteries. All these arteries are small but the thymic veins are large and lie between the lobes and terminate in the left innominate vein.

The lymphatics are not so well known but it is thought that some drain into the glands of the anterior mediastinum and according to Cooper two large vessels proceed one from each lateral lobe to open into the internal juguler vein.

When the thymus is in the height of its development it is soft, smooth and of pinkish color. It is divided into distinct lobules and sublobules and has the general appearance of the pancreas. At the height of its normal growth it at-

tains a length of about 9 or 10 cm., a width of 5 cm., and 1 cm., in thickness. It sinks in water with a displacement of 21 cc., Dudgeon, Bovaird and Nicoll all have found that the weight of 20 to 30 grams is taken to indicate a pathologically enlarged thymus.

Histologically the thymus is divided into lobes, lobules and follicles by septa composed of white fibrous tissue mixed with elastic fibres. In the finer septa separating the follicles only loose white fibres with delicate elastic fibres are present. (Mall)

The follicles are composed of a cortex and medulla altho this division is not sharply circumscribed. The reticulum of the medullary substance forms a network of branching cells whose processes communicate with each other and with the walls of the blood vessels. In these meshes lie small mononuculear leucocytes. Large polynuclear leucocytes are more seldom seen and some ecsinophilic cells are found along the blood vessels (Schafer). Giant cells are seen in the medulla and a form of multinuclear cells united with the ends of the capillaries. At certain points the constituent cells of the frame-work are pressed together so that they resemble stratified epithelium. These nests or cords of epithelum show what resembles a basement membrane at the point where they join the connective tissue. This has given rise to the theory that the medulla is wholly derived from epithelium and therefore has an internal secretion. Besides the epithelial cords there are found bodies of a concentric or lamellated appearance, known as Hassell's corpuscles or thymic corpuscles. These are also found exclusively in the medulla. They are spherical bodies with a central portion, refractive, homogeneous or grandular, surrounded by shell-like flattened epithelial cells. Their origin is due to the separation of the original thymic epithelium into isolated portions by their ingress of the mesodermic structures. Usually at the center there is a refractive mass, homogeneus in structure which through the microchemical test of Amman shows the same color reaction as colloid of the thyroid. It is without doubt a proteid and not a fatty substance.

The cortex is characterized by an abundance of blood capillaries and has a very similar structure to a lymph gland. In addition to this Schaffer and Sutton find eosinophilic cells scattered along the capillaries containing refractive granules resembling the colloid-like masses found in Hassell's corpuscles. Schaffer points out that in smear preparations of the thymus nucleated red blood corpuscles are to be found.

The blood-vessels follow the central cords penetrate the follicles and pass into a network of capillaries along the inner side of the cortex. The central portion of the medulla is largely free of capillaries. The capillaries drain into two systems of veins, one between the adjoining cortices and one deeper in the medulla. There are two sets of capillary plexuses. One superficial and one radial. The lymphatics are supposed to follow along the larger vessels and in the interlobular septa become delicate-walled lymph spaces.

I have given you the picture of the thymus gland at between 2 and 6 years. From this age the gland bgins to involute and fat is infiltrated into the gland but leaving an exact model of the gland in fat. Even to the unaided eye it will be seen that there is a marked difference between the thymus of a child and that of an adult. In th first case the organ has a solid fleshlike apperance, uniform pinkish color with well defined follicles.

In the case of the adult the organ is a fatty mass the size and shape of the original organ, but which floats in water. It may be noted in this connection that the weight of the thymus after the second year cannot be taken as a criterion of its condition, since an atrophic thymus may weigh as much as a normal one owing to the great amount of fibrous tissue present. There may be scattered through this fatty mass in the adult remnants of the once functioning gland of youth.

The function of the thymus is still very obscure. Schaffer says that it has a function of a temporary blood-forming organ to certain growing periods and has a reciprocal relation with the spleen in that when there is rich supply of nucleated red blood cells in one there is a sparseness in the other. Paton and Henderson claim a reciprocal relation between the thymus and the testes and that castration retards the retrogression of the thymus while thymectomy induces increased development of the testes. That this relation is chemical and not nervous is shown by the fact that when the thymus is autografted under the skin the early involution of the gland is the same as if it were in situ. (Marine & Manley). In this manner the thymus gland is supposed to have an inhibiting effect upon the testes preventing their too early development. This inhibitory effect is helped by the action of the pineal gland which also atrophies at about seven years of age. Gudernatsch found that feeding fresh thymus glands to tadpoles stimulated growth and inhibited the onset of metamorphosis, but Uhlenhuth does not agree with this. The thymus seems to have some effect upon the growth of bone and nutrition in the young.

The thymus may be entirely absent as reported by Clark in a baby of eight months. He endeavored to show the relationship between the absence of the thymus and a form of hemophilia from which the baby was suffering. Status lymphatics is a condition followed by sudden death which has been attributed to thymic asthma, but according to Bandler this is not the case, but death is due to toxic heart failure. There is a general lymphatic enlargement, large thymus, narrow aorta and a large soft pale heart. Wm. Browning has pointed out that in the enlarged or persistant thymus he has found a cause for stammering. He reports 25 cases all of which had an enlarged or persistant thymus He was able to reduce the gland by X-ray and as it reduced in size the stammering was improved. He also has called attention to a condition he calls thymic epilepsy, Type A, in which he finds a persistant thymus and when it was reduced the epilepsy was cured. In an article published in the Medical Record, March 12 1921, I called attention to the fact that in the Anatomy Department of the West Virginia University work had been done on about 192 bodies. From this number I found 22 persistant thymus glands, 20 of which were first or second degrees murderers, from our own penitentiary, one from Ohio County Infirmary and one from the State Insane Hospital at Weston. It was pointed out that the conduct of a person seems to be the result of all his impulses and inhibitions. His impulses causing him to act and the inhibition causing him to stop and consider his action. If something would step in between these two so there could not be the proper relationship between them, then one would be, at least while this disturbance lasted, ruled by emotions. The theory advanced was that the thymus gland has an internal secretion that inteferred with the relationship

between emotions and the inhibitions so that the person acts purely impulsively without the thought of right or wrong or the thought of consequences. When the thymus is most active at the age of two years a child is ruled almost entirely by emotions but as the thymus atrophies the child more and more becomes ruled by his intellect, until normally at 14 to 16 years the law recognizes that he is in every way accountable for his actions and at this time he has very little active thymus left. This would seem to indicate that if the thymus would continue to be active thru life the adult would still be ruled by his emotions. From this I felt justified in drawing the conclusion that the persistant thymus was in some way accountable for the mental state that caused these men 20 men to be criminals.

SECRETARY'S NOTE

The embryology, anatomy, and histology of the thymus as given by Dr. Morris was complete and interesting. On the account of the close contact and intimate blood supply of the thymus and thyroid no wonder some authorities think that the action of each has to do with the action of the other and that the function and harmony of the ductless glands is hard to understand. The function of the thymus gland is a temporary blood forming organ and the reciprocal relation between the thymus, testes and the effects of the grafting of the thymus gland under the skin was very interesting and the original work done on the thymus gland of 192 criminals sent from the West Virginia penitentiary created much interest and discussion and his conclusion that the persitent thymus was in some way accountable for the mental state that caused these men to be criminals created quite an impression and caused some physicians to remark, "We must be sending fellows to the penitentiary who cannot inhibit their criminal actions."

ENDOCRINE TYPES OF DYSMENORRHEA

By DR. MARTIN V. GODBEY

Delivered before The West Virginia State Medical Association at the Fifty-fourth Annual Session, Charleston, May 24, 1921.

Dysmenorrhea is the process of menstruation accompained by pain. It represents no disease but is only a symptom that may be due to various disturbances or abnormalities in the genital tract.

It has long been treated surgically by dilation of the cervix and, in some instances, curettement of the uterus was resorted to as it was believed to be due in some cases to endometritis. The practice of curettement has been discarded but dilation of the cervix is often resorted to for the relief of the symptoms. Many drugs have been advocated, some of which have afforded relief but none have been curative. Much has been written recently relative to endocrinology. The medical journals have been flooded with articles, some based on scientific theories and investigations, others from the stand-point of over enthusiastic advocates without any experimental or clinical knowledge of the subject. While endocrinology is in its infancy from the stand-point of the profession, no one can doubt such advocates as Blair, Bell, Cushing, Bidell, Hertojehe, and others equally eminent. That the endocrines play a part during the menstrual life of women can not be doubted. It has long been known that the thyroid was perhaps the base organ

of the endocrine system. The most striking subjects are those affected with hypo-thyroidism. The hypo-thyroid girl is generally under-sized. She menstruates at a much earlier age than normal. Often it comes as early as the ninth or tenth year. This has been demonstrated in Cretins, in which there was complete insufficiency of the thyroid gland. As a rule, the periods always come on before the age of twelve. In these cases there is generally prolonged menstruation with absence of dysmenorrhea. There is absence of the local disturbances, such as cramps, headache, malaise, langour, etc. A striking picture in these cases is the over-development of the mammary glands and the super-abundance of the hair-suit at such an early age.

In the hyper-thyroid individual, the symptoms are very much different. Dysmenorrhea is frequently if not always present with a hyper-secretion of the thyroid gland. The menstrual period appears late, up to sixteen years. The excessive thyroid secretion in the body may be so great as to produce amenorrhea, with the periods coming on at intervals. In this class of patients they are very nervous, especially during the periods. Pain is generally severe with acute nervous disturbances. It is often short, irregular, and painful. The hyperthyroid secretion also produces the eunuchroid type of individual so frequently found associated with the early deficiencies of the internal secretions of the gonads. This is perhaps due to the fact that the thyroid more or less synergizes with the gonads.

In the ovarian type of disturbance of menstruation, dysmenorrhea is generally due to insufficiency of the ovarian secretions. The menstrual periods occur in this type after the fourteenth year and mey be fairly normal for the first four or five years, generally decreasing in duration, amount, and regularity, and accompained by increasingly severe dysmenorrhea. In this form of disturbance, the genital organs are already developed and the sex characteristics present before the onset of the ductless gland disorder. There is only partial development of the mammary glands and there may be imperfect development of the sex characteristics and the absence of the hair-suit is quite constant but not so marked as in the pituitary type. The symptoms during menstruation are especially marked. They may have a characteristic pain in the region of the appendix, similating appendictis. Nausea and vomiting is most always present in this type of menstrual disturbance. The pulse is often rapid but the temperature is generally normal. A mistaken diagnosis is often made in these cases, confirmed only by an exploratory laperotomy. Dilation of the cervix and curettage seems to aggravate the condition. The usual remedies generally fail to give results in this particular form of dysmenorrhea but ovarian feeding, supplemented with hypodermics of pituitary give most excellent results.

The third type of disturbance of menstruation is the so-called pituitary type. In this type of disturbance the diagnosis is most easily made, due to entire absence of the hair-suit up to sixteen years of age. There is very little if any development of the mammary glands. There is entire absence of the external sex characteristics. The so-called infantile uterus is, as a rule, always present in these cases and nervous manifestations are a marked symptom. Neuresthesia is ever present and they often become hysterical, which is generally accompained by convulsions. These cases when seen early yield most

readily to substitution of the anterior pituitary in conjunction with the other endocrines.

RADIUM IN NON-MALIGNANT GYNCOLOGICAL CONDITIONS

By C. J. BROEMAN, M. D.
Cincinnati, Ohio.

Read Before the West Va. Medical Association, Charleston May, 1921

The presence in this country of Madame Curie, discoverer of radium, lends an added interest to a discussion of the therapeutic uses of this element, and the fact that the discoverer is one of the most remarkable women of all time renders it especially appropriate to consider what her researches and scientific achievements have accomplished in the effort to alleviate some of the pathological conditions that are the pecular heritage of women.

It is now nearly fifteen years since the therapeutic use of Radium was begun, and it application is daily becoming more extended, yet we have still no standard of technique, and until this state of confusion has been rectified, the results obtained are sure to be at variance, and progress proportionately delayed. So powerful an agent must always be employed with the utmost caution, and the danger is much greater of administering too much, and producing reactions which will give rise to popular fear of its after-effects, rather than using too small an amount, and thereby failing to achieve satisfactory results.

My use of radium in gynecology came about largely through the treatment of cases referred to me by gynecologists and other practitioners, for when I first decided to add radium to my professional equipment I purchased only enough for surface work. Very shortly, however, I found that cases were being referred to me for radium treatment the proper handling of which necessitated a much larger supply of the element, and that I must either purchase more radium, or let my most interesting cases go elsewhere. I decided to supply myself with an amount sufficient to carry on the work upon pelvic diseases. In this class of work radium has an extensive field, and while there are of course, some objections to its use, it has a permanent place in this particular sphere of employment. While some men regard it as quite without value, and others are equally sure that it is to altogether to succeed surgery in pelvic work, I personally prefer to keep to the center of the road, believeing that both radium and surgery have their uses, seperate and distinct, and that by thorough work and careful study, combined by reporting of each man's results for comparison and example, we will be able to determine the proper time and place for each one to be used.

In non-malignant uterine conditions, I have found Radium to be of the greatest service. It can be employed upon patients who have conditions precluding the use of anesthetics, or where surgery is contra-indicated for other reasons. It has an advantage over the use of X-ray because it produces only mild menopausal symptoms, while the X-ray stops ovarian activity. Other advantages of radium treatment are the relatively short stay in the hospital which it necessiates. The patient seldom has to remain longer than three or four days, and there is no tedious period of convalescent to be gone through afterward; so that there is a marked saving of both time and expense. Moreover the patient's general health

is invariably better than when she had undergone an operation. Radium can be used where such conditions as nephritis, diabetes, severe anemia, heart lesions or tuberculosis are present, in which operative mortality would be sure to be very high. By causing endarteritis thus shutting off the blood to the growth the Gamma rays destroy the mature Graafian follicle within ten days after a deep intra uterine treatment.

Mennorrhagia when it occurs in young patients with no gross pathological conditions, where medical treatment or currettement have failed, should receive Radium treatment. It should not be used however, if the patient gives a history of a pelvic infection or a pyometritis, or if she presents any physical signs of these conditions. Under such circumstances there is too great danger of the old infection being re-activated, which would only result in the necessity of a resort to surgery. In the treatment of women under thirty-five the radium applications must be made with the utmost care, and too much emphasis cannot be laid on the importance of making the initial dose a light one, so as not to produce a permanent menopause. Usually an intra-uterine application of 200 milligram hours of radium stops menstruation for a time at least. Such a dose can always be repeated if necessary. The bleeding will usually continue for two or three weeks after the radium is applied, in practically the same amount as before the treatment, and it is essential to make it clear to the referring physician, as well as to the patient herself, that this will be the case. At the end of this time the bleeding may stop, and then recur quite profusely at the next period. Following this, however, menstruation should become normal, if the proper care in grading the dosage has been exercised.

In women past the age of thirty-five—if cancer has been definitely ruled out either by the clinical history or by a diagnostic curettage—radium is now definitely considered the treatment of choice, where there are irregular periods of bleeding or menorrhagia, or bleeding at the menopause. It is gratifying to know that when the menopause is produced by the intra-uterine application of radium the accompaning symptoms are much less marked than when produced by surgery or the X-ray.

Radium is the preferred treatment in cases of metorrhagia without demonstrable pathological uterine changes. Such a case referred to me by Dr. Walter Griess was the wife of a physician, a woman thirty-eight, who had continual uterine bleeding for eight months. As she was a bad surgical risk, the surgeon was unwilling to operate, or even to administer an anesthetic. No pathological changes were demonstrable. The cervix was dilated without the use of anesthesia. I applied a 50 milligram tube of radium filtered with the standard silver and brass tubes, and in addition covered the brass tube with 2 m.m. of pure rubber. The radium was allowed to remain nine hours in the uterine cavity. It is now a year since this treatment was applied, and the patient is apparently in perfect health.

Endometritis: Endocervicitis are reported to have given most gratifying results where radium has been employed in chronic cases which have refused to yield to the customary medical measures.

Uterine fibroids have been estimated to occur in one woman out of three during some period of life. They are not frequent before the age of thirty, after that they are found in increasing in-

stances up to the age of fifty. Their exact cause is not known, but it seems reasonable to suppose that they bear some relation to the menstrual function. Virgins are more prone to fibroids than married women, and those who are sterile more often have them than women who have born children. Hemorrhage is a prominant symptom, occuring in three-quarters of the cases, sometimes appearing only as a slight increase of the menstrual discharge, and again being of daily occurance often very profuse, and of sudden onset. In perhaps half the cases there is no pain, but if this symptom is evident it usually indicates the presence of such complications as tubal inflammation, appendicitis, or such pressure indications as bladder and rectal difficulties, edema of the legs, sensation of weight in the pelvis, and referred pain down the limbs.

Radium treatment is not indicated in all cases of uterine fibroids. It is a difficult matter to get satisfactory results with the sub-peritoneal, pediculated, and very hard sclerotic types. The greatest success has attended applications which have been made to the sub-mucous variety. Myomata, undergoing degenerative changes should always be put in the surgeon's hands. To my mind those cases of uterine fibroid which should be selected for radium treatment are those in which hemorrhage is the most important symptom, which do not produce severe pressure symptoms, or extend above the umbilicus; where the patient is more than thirty-five years old. If surgery is contra-indicated for any reason, radium should be tried upon fibroids any size. If however, the growth is above the umbilicus, is causing marked symptoms of pressure or has caused inflammatory lesions in the surrounding tissues, the use of radium would be distinctly unwise.

Technique: In making use of radium in the treatment of fibroids, the patient is prepared as for curettage, no anesthetic usually being necessary. A hypodermic of morphine may be employed if it is deemed desirable. As many uterine fibroids have very patulous canals it is commonly an easy matter to insert the radium. It the cervical canal does not dilate without causing the patient considerable pain, a few whiffs of ether or nitrous-oxide can be given. Once the canal is dilated, a 50 milligram of radium, screened with the regular silver or brass tube and then covered with a 2 m.m. rubber tube, is inserted in the uterus. If we are dealing with a patient still within the child-bearing period, the application should not be as long as can be permitted in the case of a woman near the climacteric. If the tumor is large and the patient over forty the radium can be left in place as long as twenty-four hours. With a younger woman it must be withdrawn with in a proportionately shorter period.

If the first treatment does not bring about the desired result, the application can be repeated at the end of two or three months. In some cases the lapse of reaction takes place after the lapse of ten days or two weeks, with such manifestations, as chill, rise of temperature, nausea and vomiting. This is supposed to be a tonic reaction due to protein absorption.

An interesting case of uterine fibroid was referred to me for radium treatment by Dr. Francis Kramer. The patient was an unmarried woman, forty-four years old, who weighed two hundred pounds. The fibroid was of five years growth and for the previous eighteen months there had been almost continous

bleeding. The cardiac condition was so poor and the blood pressure 220, despite the excessive hemorrhage and consequent anemia, that the surgeon regarded operation as entirely out of the question, patient is now making very satisfactory of a five months' pregnancy.

One treatment of 1200 milligram hours of radium well-screened, was given intra-uterine. Later deep radium applications were made over the lower abdominal wall one a week, until the entire area of the tumor had been covered. This patint is now making very satisfactory progress. The hemorrhage continued for about three weeks after the first treatment and then ceased gradually; the size of the tumor has steadily decreased.

Conclusions: In all cases of menorrhagia of the menopause in which neither microscopic nor clinical investigation has disclosed any other distinct pathological condition, treatment by radium is indicated.

In women under the age of thirty-five, presenting cases of menorrhagia or metrorrhagia which have resisted all medical treatment, the use of radium is indicated, but extreme care must be taken to employ only a moderate dosage.

In the treatment of uterine fibroids radium is useful if the fibroid is still small, and has not evidenced pressure symptoms; it may be employed in many cases where surgery is absolutely contra-indicated.

If radium is to supercede surgery in any pelvic disorder it will probably be in the treatment of uterine fibroids.

SECRETARY'S NOTE

A fine lot of lantern slides followed this paper illustrating the methods of application, the applicators, indications for application and therapeutic doses. He showed many interesting cases of warts, lupus, cancer, tubercular glands, cancer and tuberculosis of the eye, cancer of the lips, uterus and bladder. He also said that the superfluous hair may be easily removed from bearded women. This certainly was a very interesting paper to the great mass of physicians of West Virginia who have a limited knowledge about what radium will do and and many cases which are inoperable on account of nephritis, tuberculosis, diabetes, high blood pressure or heart lesion will now be referred to the radiologist.

Announcements and Communications

Dear Editor:

Attached hereto is a copy of a letter being sent today to every physician in West Virginia. Please read it, and if you feel that it is of sufficient importance to publish in your next issue, do so.

We are grateful for the support which has been so freely and generously accorded us by the press of the State, and while we do not wish to impose upon your good nature, we trust you will continue to print our press bulletins when you consider them worth while.

Most sincerely yours,

F. F. Farnsworth.

P. A. Surgeon, U. S. Public Health Service, Director, Bureau Venereal Diseases.

Dear Doctor:

I have just returned from attending teachers' institutes in nine counties where I made talks on public health. Dr. Henshaw, State Health Commissioner, and others representing the State Department of Health have been busy attending other institutes and doing the same thing. The attitude of those with

whom we came in contact with includes almost every school man and woman in the state from the State University to the smallest district school, convinces us that there is a place in the common schools for health education.

The Dentists of the State have loyally helped in this brief campaign, and I believe that a foundation has been laid for the actual teaching of practical sanitary measures and diseases prevention in our schools. County Superintendents, Boards of Education and teachers themselves have assured us of this and only await the proper encouragement and help from those who are better prepared to direct it.

This help will be gratefully furnished by the State Department of Health, but can only be partially successful without the support and cooperation of all physicians and health officers. If your school happens to be among the very few that have sanitary inspection, it is your duty to observe imperfections and suggest remedies. If there is no one whose specific duty it is to look after these matters, we hope that you will consider it your duty to do so, and not only suggest and secure proper sanitation of the school house and grounds, but use your influence as a physician to stimulate the teaching of these things inside the school itself.

Many of the best and busiest physicians of the state have already promised this cooperation, I therefore have no hesitancy in asking all of you to do the same. The next decade is certainly going to be one of radical changes in health education and in disease prevention. Are you going to be on the band wagon or stand on the curb?

Most sincerely yours

F. F. Farnsworth

P. A. Surgeon, U. S. Public Health Service, Director, Bureau Venereal Diseases.

ANNOUNCEMENT: SOCIETY OF ANESTHESISTS

Plans are under way to organize a Southern Society of Anesthetists at Hot Springs during the coming session of the Southern Medical Society there Nov. 14-17.

This rapidly growing and new fully recognized specialty has had no Society devoted to its welfare and advancement in the South, while for some years such aggressive and wide awake organizations at the Interstate Ass'n., of Anesthetists, Amer. Ass'n of Anesthetists and others are developing the speciality in other sections of the country.

Those interested in such an association are requetsted to communicate with Dr. W. Hamilton Long, 1922 Deer Park Ave. Louisville, Ky. Organization Sec'y.

September 3, 1921

My Dear Doctor:

At the last meeting of the Southern Medical Association, at Louisville, Kentucky, a section on Neurology and Psychiatry was organized. The first meeting of this section will be held at Hot Springs, Arkansas, Monday, November 14, 1921 .

The provisional program, which you will find enclosed, is unusually attractive. May we not count on your presence and on your co-operation to make this meeting a great success?

We are anxious to have a good pathological exhibit. If you have specimens or photographs which you can show,

please let us know approximately how much space you will require.

Faithfully yours
Paul V. Anderson
Secretary.

PART 1

A Symposium of Early Detection of Mental disorder.

1. An Evaluation of Intelligence Tests. Invited guest, Professor Fletcher of Tulane University and Sophie Newcomb College.

DISCUSSION

The Early Recognition of Mental Diseases.

2. Precocious Signs of Mental Diseases,
Dr. Roy M. Chayman, Sheppard and Enoch Pratt Hospital, Towson, Md.

3. Psycho-Neuroses in their Incipiency,
Dr. Sidney Schwab, St. Louis, Missouri.

4. Early Manifestations of Psycho-Neuroses,
Dr. Louis E. Bisch, Ashville, North Carolina.

Discussion (of above three) opened by Dr. Bondurant, Mobile, Aala. and Dr. Summerville, Memphis, Tennessee.

5. Psycho-Neuroses in Public Health Hospitals,
Dr. Benton, Miami, Florida, U. S. P. H. S. Hospital, Gulfport, Mississippi.

Discussion, Dr. W. W. Graves, St. Louis, Mo., and others.

PART II.

1. Chairman's Address: The Treating of Neurology, Psychiatry, and Psychopathology, and their Relation to General Medicine and Other Specialties, Especially the Eye, Ear, Children, Orthopedics, Gastroenterology, and Genito-Urinary Diseases.

2. The Pathology of Pellagra,
Dr. W. M. Bevis, U. S. P. H. S. Hospital, Augusta, Ga.

3. Muscular Atrophies and Dystrophies Contrasted with Emaciation,
Dr. Beverly Tucker, Richmond, Va.

4. Presentation of a Patient with Progressive Lenticular Degeneration,
Dr. M. L. Graves, Galveston, Texas.

5. A Pecular Case of Hysteria,
Dr. E. Bates Block, Atlanta, Ga.

Discussion by Dr. Louis Schwab of St. Louis, and Dr. Houston of Augusta, Georgia.

Demonstration of Specimens, Charts, etc.

Sept. 7, 1921.

To Public Health Officers, Physicians, Clinicians, Nurses, Social Workers, and others Interested:

In response to a preliminary announcement of the Public Health Institute, which the Public Health Service has planned to hold in Washington next fall (but which has been postponed indefinitely), a large number of city and county health officers, physicians, nurses and others replied indicating a definite intention or hope of attending.

The Public Health Service has felt that it could not ignore this widespread interest in institute work, and after correspondence wth the various State Boards of Health, has decided to hold a series of twenty-four institutees at various population centers throughout the country.

It is expected that most of the well known specialists announced for the two-weeks' instiute in Washington will be on the faculties of two or more of the various local institutes. Inclosed is a schedule of courses which will probably be adopted, with various alterations, by most of the institutes. No tuition will be charged.

Last year four times as many persons attended the Venereal Disease institute as were expected. In order that ade-

quate plans may be made for this series of local institutes, will you kindly return the enclosed card filled out, in case you hope to attend any of them?

Respectfully,
H. S. Cumming
Surgeon General.

Tentative schedule of dates:

Hot Springs	October
Jacksonville	Nov. or Dec.
New Orleans	Jan 9-14
Columbia	Jan. 9-14
Dallas	Jan. 16-21
Birmingham	Jan. 16-21
Memphis	Jan. 23-28
Louisville	Jan. 30-Feb. 4
Indianapolis	Feb. 13-18
Pittsburgh	Feb. 20-25
Lansing	Mar. 6-11
Chicago	Mar. 13-18
Minneapolis	Mar. 20-25
Los Angeles	?
San Francisco	?
Portland, Oregon	Apr. 10-15
Kansas City, Kansas	Apr. 10-15
Spokane	Apr. 17-22
Newark	Apr. 17-22
Helena	Apr. 24-29
Albany	Apr. 24-29
Denver	May
A New England City	May 1-6
Washington	Late in May

The Hot Springs, Ark. and Chicago institutes will deal only with problems of venereal diseases control.

Monday

9:00 A. M. Syphilis
10:00 A. M. Tuberculosis, The delinquent
11:00 A. M. Nutrition in health and disease
1:30 P. M. Syphilis The general communicable Diseases
2:30 P. M. Industrial hygiene Protective social work
3:30 P. M. Child hygiene Sanitary engineering

Wednesday

9:00 A. M. Syphilis
10:00 A. M. Tuberculosis The delinquent
11:00 A. M. Nutrition in health and disease
1:30 P. M. Syphilis The general communicable diseases
2:30 P. M. Industrial hygiene Protective social work
3:30 P. M. Child hygiene Sanitary engineering

Friday

9:00 A. M. Gonorrhea
10:00 A. M. The non-communicable diseases Medical social work
11:00 A. M. Mental hygiene
1:30 P. M. Gonorrhea The general communicable diseases
2:30 P. M. The management of clinics and health centers
3:30 P. M. Administrative problems Child hygiene

Tuesday

9:00 A. M. Syphilis
10:00 A. M. Tuberculosis The delinquent
11:00 A. M. Nutrition in health
1:30 P. M. Syphilis The general commuicable diseases
2:30 P. M. Industrial hygiene
3:30 P. M. Child hygiene
3:30 P. M. Child hygiene Sanitary engineering

Thursday

9:00 A. M. Gonorrhea
10:00 A. M. The non-communicable diseases Medical social work
11:00 A. M. Mental hygene

1:30 P. M. Gonorrhea
The general communicable diseases
2:30 P. M. The management of clinics and health centers
3:30 P. M. Administrative problems Child hygiene

Saturday
9:00 A. M. Gonorrhea
10:00 A. M. The non-communicable diseases Medical social work
11:00 A. M. Mental hygiene
1:30 P. M. Gonorrhea
The general communicable diseases
2:30 P. M. The management of clinics and health centers
3:30 P. M. Administrative problems Child hygiene

THE FOLLOWING ARTICLES HAVE BEEN ACCEPTED BY THE COUNCIL

On Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies.

The Abbott Laboratories:
Procaine-Adrenalin Hypordermic Tablets No. 2.

Dry Milk Co.:
Protolac

Hynson Westcott and Dunning:
Tablets of Benzyl Succinate—H. W. and D.

Intra Products Co:
Ampules Ven Sterile Solution Mercury Oxycyanide 0.008 Gm.
Ampules Ven Sterile Solution Mercury Oxycyanide 0. 016 Gm.

Lederle Antitoxin Laboratories:
Acne Combined Vaccine.

Mead Johnson and Co.
Casec.

N. Y. Intravenous Laboratory:
Leeser's Intravenous Solution of Mercury Oxycyanide.

Seydel Mfg. Co.:
Benzyl Succinate-Seydel.

Nonproprietary Articles:
Benzyl Succinate.
Calcium Caseinate.

Beebe Laboratories, Inc.:
Beebe Protein Milk.
Beebe Modified Buttermilk.

Armour and Co.:
Suprarenalin Solution-Armour.

The Diarsonel Co.:
Silver Diarsenol
Silver Diarsenal 0.05 Gm. Ampules
Silver Diarsenol 0.1 Gm. Ampules
Silver Diarsenol 0.15 Gm. Ampules
Silver Diarsenol 0.2 Gm. Ampules.
Silver Diarsenol 0.25 Gm. Ampules.

Hynson, Wescott and Dunning:
Mercurochrome-220-Soluble.

The Abbott Laboratories:
Saligenin

Armour and Co.:
Suprarenalin Base
Suprarenalin Ointment

E. Bilhuber:
Santyl Capsules.

The Calco Chemical Co.:
Amidopyrine-Calco

Hynson, Westcott and Dunning:
Tablets Mercurochrome 220-Soluble

H. A. Metz Laboratories:
Orthoform

Winthrop Chemical Co.:
Mesotan

Nonproprietary Articles:
Amidopyrine

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., Editor
C. R. ENSLOW, M. D.
J. E. RADER, M. D. Assistant Editors

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

ADVERTISEMENTS

Advertising forms will go to press not later than the 10th of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

Editorial Office: 804 Lincoln Place, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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IN MEMORIUM

DR. LOUIS D. WILSON

On Saturady morning, August 27th., 1921, there suddenly passed from earth the soul of Dr. Louis D. Wilson. The cause was angina pectoris. The first intimations of this disease were received about seven years ago, and as a result the doctor has since led a less active life although never entirely giving up his practice. He was out in his machine on Friday, and the writer had the pleasure of his companionship for a two miles ride, the doctor kindly taking him from the city to his suburban home. He ate breakfast as usual the next morning, as usual lay on his office couch to read the morning paper—for during the Summer he had not been feeling very well—and in about an hour passed peacefully and without a struggle from earthly duties and troubles.

Dr. Wilson was born on a farm in Ohio County Nov. 30th., 1846. He completed his collegiate education at Bethany College, graduating with the degree of A. B. in 1866, and receiving the degree of A. M. some years later from the same college. He received his medical education at The University of Penna., grad-

uating in 1870, and located for practice near his old home, from which he removed to Wheeling in 1876. It is thus seen that he more than completed a half century of practice. Soon after locating in Wheeling he was made county physician, and held this position for fifteen years.

The doctor soon joined both the county and state medical societies, taking an active interest in both until impaired health interfered. Of the former he was twice president, this double honor having been conferred upon but one other member. In 1889 he was elected president of The State Medical Association, and presided at White Sulphur Springs in 1890. For five years he served as a member of the publishing committee of this Association, and when The State Medical Journal was established he was continued in this position until an editor was elected, when he and Dr. Dickey became assistant editors. This position he continued to occupy for nearly ten years, rendering most valuable services. Few writers equalled Dr. Wilson in the force and purity of his English. The total of his contributions to the Journal numbered forty-one. He always read the last proof for The Journal, and after this work was done the Journal rarely contained an error of any kind.

From its organization until his death Dr. Wilson was a member of the visiting staff of The City—now the Ohio Valley General—Hospital, and most of this time he was Dean of the staff. For a number of years he was also a member of the hospital Board of Trustees.

Dr. Wilson was a diligent student all his life. He was a careful and thoughtful reader of medical literature, taking no writer's ipse dixit until he had submitted it to his own critical investigation. His views once formed, were tenaceously adhered to, and he was always prepared to defend them. His judgement in medical cases was highly esteemed by his fellow practitioners. Of modest demeanor and totally free from clap-trap and the methods of the quack, he never had a sensational reputation, but his high character, careful methods and superior judgement were the foundations of a practice among the intelligent and sensible people of the community.

Following is the action of Ohio County Medical Society touching this death. A committees composed of Drs. Jepson, Schwinn and Baird reported the following which was unanimously adopted:

When life's fever was over for Dr. L. D. Wilson, a strong man dropped from the ranks of the medical profession. For almost fifty years his familiar form was seen about the streets of Wheeling as he went on his rounds rendering faithful and intelligent service to his many patients; and his conduct was at all times such as to command the respect and esteem of every member of the profession which the charlatan so often adopts to all his professional relations, absolutely free from boastfulness or the sly methods which the charitans so often adopts to gain patronage, he achieved success solely on his own merits, and secured the confidence of his co-workers because his opinions were based on sound judgment after a careful examination of his cases. Liberally educated before he entered upon the study of medicine, and graduated from one of the most famous medical instiutions of the country, through his long professional carer he continued to be a diligent student. Few practitioners of the city have enjoyed to so great an extent the confidence of his brethern, and the esteem in which he was held was shown by his election as president of the County Medical society and also of the State Medical Association.

Resolved: That the members of Ohio County Medical Society hereby express their sense of the great loss to the medical profession and the community occasioned by the death of Dr. L. D. Wilson.

Resolved: That we hereby extend to the family of the deceased our warmest sympathy, and the assurance of our personal regard for our departed fellow member.

Resolved: That a copy of this action of the Society be sent to the family of the deceased, printed in the Wheeling morning newspapers, and in the West Virginia Medical Journal .

Resolved: That we attend the funeral in a body.

S. L. Jepson.

It was with a feeling of distinct loss that we learned of the death of Dr. Louis D. Wilson of Wheeling. My friend, Dr. Jepson, has left nothing commendatory unsaid in his memorial to his friend. This is merely to add a few words of appreciation of this lovable man, as I knew him.

One of the first of that able coterie of my early days in the State Association, whom I met was Dr. Wilson. As a mere "cub" in the Association I learned to admire him.

Words are weak things when we try to use them to express our feelings for a "real man." Sometimes it seems to me that we may best express our admiration, our appreciation, our love—by a silent bowing of our heads while our hearts say "Pax."

THE ENDOCRINES

We have been surfeited of late with opinions and advices along the lines of Endocrinology. Sometimes we wonder if the professional has gone daft on the subject. Not so long ago it was Tuberculin, X-ray, then Radium which was each in its turn to make the goal of our Medical Millenium. Shortly Erlich told us of Salvarsan and later Neo-Salvarsan and we KNEW we were there.

But lo and behold we had over-loked the Endocrines (and Vitamines) and so now we know that we are on the threshhold of the last defense of disease.

Sometimes we wonder why it is that the cool, calm reasoning minds of physicians seem to have periodical attacks of flying off their tangents. Just about every so often we have an attack of "Non-tangentitis." Just now it seems to be our Endocrine tangent that is on the rampage.

There are hopeful signs on the horizon however. It is encouraging to know that some of us still have our feet on the ground and while we appreciate the advances in this field have not run amuck on the subject. The papers in this issue are heartily commended for their sanity.

In this connectin we would call especial attention to the paper on The Thymus by Dr. Morris of Morgantown. For many years we have had an especial interest in deviations from the Mental Normal, so to speak. Often it has seemed that there must be some true reason for the criminal and that he was not essentially wicked or vicious, but diseased.

These very interesting observations of Dr. Morris, which are, so far as we know, the first to be made upon this subject of the possible bearing of a persistent Thymus on the causation of criminality, are of profound import.

We know of the work of a number of West Virginia physicians which has brought great honor from beyond the confines of our state. There is none which is of greater value than this of Dr. Morris if subsequent study and observation confirms his deductions.

THE SCHOOL EXAMINERS

Sometimes we may feel that too many laws are put upon the statutes. We see so very many that are un-enforced or half-heartedly enforced that we get disgusted. We wonder who, what, and why. No answer being forth-coming we say to ourselves, Oh! H—l and let it go at that.

This is preliminary to the school examining physician matter. It is of only recent adoption in West Virginia and we have really not as yet had time to truly see just what can be done. Our personal opinion has been to look on it favorably as a piece of legislation pregnant with great hope of wonderful results if but given time for accomplishment.

The results of the work done in the city of Charleston in meeting the great prevalence of Simple Goitre, shows just what may be accomplished. Dr. Moore's paper is enlightening.

There can be no question but what the rank and file of the profession must have a rejuvernation from time to time. We pound along through the day's work from a case of colic to ruptured appendix and get very snug and complacent in our conceit.

Then comes a fellow who tells us from 50% to 59% of our children have simple goitre and that Sodium Iodide grains three for ten days twice a year will work wonders. And we never thought of it;

I wonder just how other men feel about such things.

This shows the great good which may be done and the authorities of Charleston are to be commended.

DOCTOR CONCENTRATE YOUR EFFORTS ON PRESIDENT HARDING. HE IS FOR THE SHEPPARD-TOWNER BILL. EFFORT EXPENDED ON INDIVIDUAL CONGRESSMEN IS WASTED.

In fighting the Sheppard-Towner Maternity Bill all energy should be directed to President Harding. The medical profession throughout the United States have heard from a sufficient number of Senators and Congressman to convince us that effort expended on individual Congressman is wasted. Work should be done at the head of the the organiation. Several Congressman have answered their doctor constituents who protested against the passage of the Sheppard-Towner bill in substantially the same language as follows: I am an organization republican and await instructions. Referring to the Sheppard-Towner Bill I will say there are provisions in it which I am opposed to and I have not entirely settled in my own mind just what my attitude ought to be, so many questions are involved. There is a great deal of opposition to it and much feeling about it. The President, however, is very strongly for the bill and his influence, of course, is very considerable.

Ed. Ill. Med. Journal.

State and General News

MARSHALL COUNTY LOCALS

Dr. Benjamin F. Bone and family have returned from Lake Odessa, their summer home.

Dr. A. F. Compton and wife have returned from their vacation which they spent around the Great Lakes and in New York.

Dr. D. B. Ealy was a professional visitor to Baltimore the first part of the month.

Dr. Joseph C. Peck is spending his vacation on the South Branch of the Potomac with a camping party.

Dr. and Mrs. Wm. P. Bonar and daughter Miss Alma spent their vacation on Fish Creek at the Girls' Scout Camp.

Dr. and Mrs. O. F. Covert spent their vacation in Northern Ohio on their farm and in visiting the doctor's father.

Dr. L. H. McCuskey and family have returned from a two week's vacation spent at Niagara Falls and in Canada.

Born August 19th to Dr. and Mrs. J. A. Streibich a girl christened Mary Josephine.

Dr. C. S. Fortney of Hundred has recovered from an attack of typhoid fever.

Dr. Joseph A. Porter has moved from Littleton to the Coal Fields in Southern West Virginia. His new address is not known.

Elmore Mossman, Point Pleasant, W. Va. (license, West Virginia, 1883); died, August 1, aged 67.

Dr. E. M. Chalfant formerly located at Shinnston has removed to West Shinnston. Dr. Chalfant's father William Chalfant a pioneer citizen of Harrison County, died in August.

Dr. Frank C. Hodges and Miss Aline S. Adams both of Huntington were married on Wednesday, the fourteenth of September, and are spending sometime in the East, at Boston, New York and Washington.

Dr. F. L. Hupp has returned to his home at Wheeling after his summer vacation spent at Lake George, New York, making the trip by motor both ways and stopping at New York City.

Dr. and Mrs. L. T. Vinson spent sometime recently in the East.

Governor Morgan has appointed Dr. Dennis McChung of Ruppert, W. Va., as Superintendent of the State Hospital for the Insane at Spencer, to succeed Dr. Samuel R. Holroyd.

Dr. Thomas H. Meighen of Wheeling died August 9 at Littleton, W. Va., aged 56. Dr. Meighen was a member of the West Va., Medical Assoeiation and served as captain in the late war.

The American Society for the Control of Cancer has inaugurated a "Cancer Week" begining October 30 and ending November 5 of this year.

The American Aademy of Opthalmology and Oto-Laryngology will hold its twenty-sixth meeting at Philadelphia, October 17, 22.

Dr. R. V. Shirley and family of Ceredo spent sometime recently in Virginia and other eastern points.

Dr. Fred Marcum after an extended visit at French Lick Springs has returned to his home at Ceredo.

Dr. Barton B. McCluer formerly of Kimball has moved to Bon Air, Virginia.

Dr. R. H. Walker of Charleston is spending a few days in Chicago.

Dr. T. E. Romine of Charleston is taking a vacation in the mountains hunting and fishing.

The Kanawha County Medical Society will hold its first meeting after the summer vacation on Tuesday, September 20th.

Dr. George M. Lyon has recently returned to Huntington from Baltimore where he has taken two years speializing in ehildrens diseases at the John Hopkins Hospital. He will open offices with Dr. Oscar Biern in October.

Drs. C. M. Hawes, Ray Bobbitt and J. H. Steenbergen of Huntington have returned from a hunting and fishing trip spent at Wolf Creek in Monroe County.

The following resolution was passed at a meeting of the Kanawha County Medical Society.

RESOLVED: That the Medical Profession of Charleston and Kanawha County express our confidence in the authorities of our State and local governments in the present crisis.

That we further offer our active support in preserving law and order in our State and County that our officials may demand of us.

Kanawha County Medical Society.

MEDICINE

TRADITION vs. COMMON SENSE

When the human body is out of order why does it not get the same rational consideration that an automobile receives It is because man has an innate conviction that every ill must have a remedy and he has been born with a strong tendency to look for that remedy outside of the body. This reliance upon the unnatural, if not supernatural, undoubtedly goes back to the dawn of human intelligence and since that time, throughout the ages, progress towards a logical adjustment to our environment has been a very slow evolution. How strong that barbarous conviction and superstitions of our ancestors must have been may be judged by the residues that have come down to us,—our superstitions regarding sitting down at a table of thirteen, passing under a ladder, spilling salt, seeing the new moon at the proper angle, are a few examples. The faith of our forebears in drugs and herbs, though becoming rudimentary, is still responsible for shelves full of drugs,—traditional "materia medica," in the pharmacies and in the doctors' offices and for the child-like confidence with which we snap at any new "phylacogen." It is because the doctor looks wise and seems to betray a confidence (which he often feels) in his own expeditious efficiency that the ingenious patient allows himself to be placated visit after visit with a new tablet or changed prescription, instead of demanding an examination such as the automoblie would have received promptly. It is the same instinct that leads the layman to exhaust all the patent medicines that he can find before he consults a doctor,—apparently the same influence which leads many of the profession to exhaust the unpatented or "ethical" propietaries instead of stripping and examining the patient. The doctor often says that the patients will not pay for a proper examination, but does the doctor ask the patient What would be the response of the patient if the doctor were to say,—"I will look at your tongue, feel your pulse, listen to the sounds made by your various articles of clothing over your heart and lungs, hear a part of your story, and give you a prescription for one dollar, or I will examine you thoroughly, carefully listen to and weigh your entire story, send your blood, urine, or anything else that should be examined to a competent laboratory technician, possibly refer you to specialists for the examination of your eyes, ears, throat, teeth, etc., and when all are finshed I will take the various reports into consideration and try to determine what is wrong and what had best be done. For this the charge will be in proportion to the time consumed—from ten dollars to twenty-five dollars."

A knee whch has been treated for months for "rheumatism" is cured by a specially prescribed and carefully fitted shoe. A stomach harassed for years with tonics, digestive, "alteratives," etc., is cured by removing a chronically infected appendix. A child that has had semi-annual attacks of rheumatic fever

and finally endocarditis is suddenly cured by an operation on a chronic mastoid or the removal of infected tonsils. These are daily occurances and the masses are becoming familiar with such things and learning to compare the final cost between the superficial and the thorough.

The doctors say, on the other hand, that they cannot possibly get through their work if they give to each patient sufficient time for a proper examination. Their waiting rooms are crowded every day, they cannot get time to eat and sleep, and the sociologists say there is a real shortage of doctors! Why not diminish the congestion in the waiting room by referring some of the patients to competent specialists, or to young doctors in the neighborhood who are known to have an up-to-date equipment and education? Why not make time to treat the real patients fairly by teaching the others that they do not need treatment? Why not try in every way to show the laity the absurdity of their faith in drugs instead of encouraging it by passing out prescriptions and tablets "because the patients are not satisfied if they do not get something"? Why not preach to them at every opportunity that they should ignore trivial discomfort unless definitely localized and persistent, and that for the rest they should give their bodies the same logical consideration that they give to their automobiles? Here there are no befogging traditions. We do not rub it with St. Jacob's Oil when the shaft is bent, or pour foreign chemicals into the radiator, crank-case, or carburetor when they do not function smoothly. We strip the thing and study each part to find out what is wrong. We should look upon the human body in the same way. It is not a question of what drug may help or what operation does she need now. The question is, what is the real trouble and how did it occur. First: Is there an infection and if so of what nature and from what source? Second: If no infection can be found that will account for the symptoms, then does the patient get enough food, or does he take too much, or does he do something wrongly, too much or too little. Has he a mechanical handicap, curvature, ptosis, varicose veins, broken arches, or badly fitted shoes?

We hear a man who is eighty pounds overweight report that "doc" hays he has a weak heart and has given him a good heart tonic, or a poor little undernourished woman with every organ in her body crying out for food or support who exclaims "the dear man says I am on the verge of a nervous breakdown and that I must go to Atlantic City and take my valerian and iron regularly." The pathos robs the situation of its humor.

Ed. Penn. Med. Journal

REPORT OF OHIO COMMITTE ON ANESTHESIA

A committee appointed by the Council of the Ohio State Medical Association to investigate matters connected with anesthesia sent out questionaires to 500 surgeons and 400 hospital superintendents throughout the country, asking their views as to: (a) the choice of graduate physicians or graduate nurses in the giving of anesthetics; (b) the responsibility of the surgeon in the determination of what anesthetic agent should be used; (c) the choice of the anesthetic agent for ordinary purposes; (d) deaths which have occured from anesthetics, and (e) fees or salaries paid for the giving of anesthetics, and asking for any suggestions which might be offered. Of those who replied to the questionaire, 241 surgeons assume entire responsibility for the choice of anes-

thetics; twenty-one leave it to the anesthetist; forty-nine assume joint responsibility with the anesthetist. Three surgeons prefer chloroform; 238 prefer straight ether; two use ether with oxygen; twenty-two use nitrous oxid-oxygen; sixty-five use ether with nitrous oxid as a preliminary. One hundred and three prefer the nurse anesthetist; 181 prefer a medical man; forty-seven are indifferent, using ether; ten prefer nitrous oxid-oxygen; thirty-six prefer ether, with nitrous oxide as a prelminary. Eighty-three prefer the nurse anesthetist; seventy-eight prefer the physician anesthetist, and twenty-eight use the two indifferently. The committee regards the administration of anesthetic agents as being almost entirely a routine procedure, and something which can be done by any intelligent physician or nurse, even by a layman who has had a reasonable amount of instruction in their administration. With the exception of a few highly trained men, the duties of the anesthetists are not such as to render the administrators in any scientific sense specialists. The work of the anesethetist being as a rule routine, the suggestion of many of the hospital superintendents and surgeons that the position should be placed on a salary, like that of hospital superintendent, pathologist, etc., meets the committee's approval in the case of hospitals which have enough work to justify the creation of this position. For smalller hospitals it is recommended that the work, so far as possible, should be done by experienced physicians or nurses, rather than by inexperienced physicians or assistants, including interns—unless the later are under the immediate supervision of a skilled anesthetist instructor. A number of hospitals employ on salary a part-time anesthetist, who devotes the rest of his time to ordinary professional work. When the number of operations does not justify a whole-time or part-time salaried anesthetist, compensation must be as at present by suitable fees. Since anesthesia deaths, when all are preventable by the anesthetist, usually result from carelessness or inattention, the committee recommends that under no circumstances should the surgeon permit the attention of the anesthetist to be diverted from his work by watching the operation, by assisting in any way in its performance, or by conversation with visiting physicians, nurses or other persons. The committee fails to see as yet a reason for any change in the state law relating to the administration of anesthetics by graduate nurses who have been particularly instructed in their work. The amount and character of such instruction should be determined by rules adopted by the state board of registration.

A MARVEL OF MEDICAL SCIENCE

Medical science has just given to the world another surprise in demonstrating that a product of the human body, adrenalin, can be used in restoring the dead to life. Haste to qualify the statement seems necessary in fact of the certain impression the statement will make. It does not mean resurrection in the wider sense, but revival somewhat after the manner in which persons are restored to life by the pulmotor, which is a purely mechanical thing utilized to induce respiration. Persons who have died suddenly while apparently in good health may be and have been restored to life by the use of adrenalin.

Adrenalin is a miracle-working product of two little glands, each situated on top of the human kidneys. The glands manufacture from time to time a vital essence that is poured into the blood stream to maintain the efficiency of heart action, to control and regulate blood-

pressure, to tone up and strengthen the muscular system and to improve the standard of blood quality. Addison's disease results when the supply of adrenalin is interrupted and the victim suffers a fall of blood-pressure, weak heart action, muscular feeblesness, anaemia and bronzing of the skin.

Physicians have found out these things about adrenalin and are now applying it medicinally. A child of eleven months collapsed while undergoing an operation and died. The body became cold Adrenalin was administered and the child recovered and is still living. Another case was that of a woman who dropped dead, her heart having ceased to beat, her jaw becoming set and her eyes indicating that death had occured. Adrenalin restored her and wthin a few minutes she was sitting up and talking. The discovery is a distinct triumph for medical practice, since it will save many lives that otherwise would be forfeited. It is a direct contradiction of the theory, as were the x-ray and radium, that science had learned all, that there was nothing new possible.—Sioux City Journal. (Iowa Journal).

COUNTRY DOCTOR HAS HIS REWARDS.

The Massachusetts country doctor, it is estimated, takes in about $2,000 a year. That is more than most of his clerical brethern earn. But it is little enough for a man fit to repair the delicate human enginery. The real reward in his profession, as with the rural ministry, lies in the respect he commands, and the chance to be regarded as the best friend and helper of a wide circle. Strong as the lure of a city practice is to many a physician, there are some who are fortunately content with the less conspicuous place in the sun of public recognition and professional acclaim that rural practice offers. It does not follow, however, that a doctor in a small place is obscure. Rochester, Minnesota, is not so big as Philadelphia, Boston or New York, yet a multitude in quest of healing has hit the trail to the shrine of eminent physicians there. William Dean Howells was fond of pointing out the excellence of the literature produced in quite country places, and it is true of other forms of healing that not all of the ablest ministrants are metropolitan.—Philadelphia Public Ledger. Iowa Journal.

Surgery

CLINICAL MANIFESTATIONS IN GALL-BLADDER DISEASE; A STUDY OF 1,000 OPERATIVELY DEMONSTRATED CASES

Smithies, F. (*Northwest Med.*, 1920, xix, 31). The operative mortality in the 1,000 cases reported was 5.9 per cent. Six hundred and seventy-two of the patients were females and 328 were males. The average age was 43.2 years. In 112 cases (11.2 per cent) acute infectious ailments seemed to be directly responsible for the initial evidences of the gall-bladder condition or excited to activity processes previously quiescent.

The conditions demonstrated at operation were as follows: non-malignant cholecystitis associated with calculi, 509 cases (50.9 per cent); cholecystitis with altered bile and sand-like substance, 46 cases (4.6 per cent); carcinoma of the gall-bladder, 19 cases (1.9 per cent); carcinoma of the gall-bladder associated with gall-stones, 14 cases (73.8 per cent of the total number of cases of carcinoma); cholecystitis without stones, "sand," or malignancy, 434 cases (43.4 per cent).

Appendectomy had been performed upon 84 patients prior to observation for the gall-bladder ailment. In 682 cases appendectomy was found to be indicated and was performed during the laparotomy for the gall-bladder condition. Accordingly, in 766 cases (76.6 per cent) the gall-bladder disease was associated with an abnormal condition of the appendix. Enlarged lymph glands were found in 124 cases, chronic pancreatitis with enlargement in 63, acute pancreatitis with fat necrosis in 2, enlargement of the liver in 73, and peptic (gastric and duodenal) ulcer in 80.

Pathologically the gall-bladder showed acute catarrhal inflammation in 228 cases (22.8 per cent). In 51 per cent of this group this inflammation was associated with stones and in 8 per cent by a sand-like substance. Chronic catarrhal inflammation was present in 328 cases (32.8 per cent) and in 63 per cent of this group was complicated by stones or "sand." Chronic inflammation was found in 434 cases of which 91 per cent showed stones or "sand." As has been stated previously, carcinoma was present in 19 cases.

In 21 cases re-operated upon within six months after gall-bladder drainage no stones were found at the second operation. It seems apparent, therefore, that the presence of gall-stones does not necessarily indicate years of gall-bladder disease. About 85 per cent of gall-stones contain viable bacteria whereas the bile is actively infected in only from 20 to 30 per cent of cases.

In 59 cases of gall-stones there were apparently no symptoms of gall-bladder disease but close analysis after the presence of the stones had been proved usually disclosed mild digestive disturbances or even marked symptoms that had been overlooked. Less than 8 per cent of the patients were obese. In a little more than half of the cases the body weight had remained constant. Belching was a prominent and distressing symptom in 68.9 per cent of the cases, nausea in 37.6 per cent, and anorexia in 27.3 per cent. In 92 per cent the symptoms were those of dyspepsia.

Jaundice was present in 161 cases (31.6 per cent) in which gall-stones were demonstrated and was intermittent or constant in nearly one-fourth of the cases in which operation failed to demonstrate the presence of stones. This indicates how difficult it is to determine the actual condition and content of the gall-bladder before operation. Usually only a diagnosis of cholecystitis can be made even though certain symptoms point toward the presence of stones as well.

Pain was a characteristic symptom in 95.5 per cent of the cases. In 68.8 per cent it was intermittent, and in 21.1 per cent, constant. Apparently it was as severe in some of the cases in which there were no gall-stones as in those in which the presence of stones was demonstrated. In the latter group it usually ceased almost as abruptly as it developed. In severe colics the administration of opium was necessary.

In 90 per cent of the cases observed the pain was relieved by heat; in 45 per cent, by vomiting; in 82 per cent, by belching; in 22 per cent, by alkalies; and in less than 7 per cent by the ingestion of food. The relief afforded by food is an important point in the differential diagnosis between peptic ulcer and gall-bladder disease. In the latter the pain is commonly irregular and without apparent definite cause. Other frequent symptoms are a sensation of fullness on pressure, soreness, and a dull ache. In 74 per cent of the cases the right upper quadrant was the seat of the pain, and in 14 per cent, the entire epigastrium.

Transmission was absent in 32 per cent, including 23 per cent of the cases of gall-stones and 41 per cent of those of non-calculous cholecystitis. Transmission into the right back occurred in 63 per cent. Abdominal tenderness was recorded in 883 cases and absent in 117 cases. Jaundice occurred in 287 cases (including 25.5 per cent of those of cholecystitis without stones). Vomiting was annoying in 452 cases. Test meals showed an average content of free hydrochloric acid of 32.6 and a total acidity of 47.9. Gastric achylia was observed in 20.9 per cent of the cases. In 87 cases of cholelithiasis stones were definitely or inferentially demonstrated by roentgenograms in 19 (21 per cent).—Ex.

OPERATIVE METHODS IN EMPYEMA

H. Lilienthal (*New York State Journal of Medicine*, Oct., 1919) discusses the treatment of empyema which he classifies under four heads. 1. Empyema resulting from pneumonia must be considered as likely to present numerous cavities due to the rupture of several small lung abscesses into the pleural cavity at different points. These must be discovered at the operation or subsequently by means of the x-ray when the removal of the main body of the pus makes their detection possible. If mechanical pressure be the cause of the chief symptoms, the pus may be removed by simply inserting a cannula into the lower part of the pleural sac and allowing the pus to run out and be replaced by air which at the end of the evacuation may be forced out by having the patient strain with the glottis closed and withdrawing the cannula when the last bubble of air escapes. Occasionally this is not followed by a recurrence of fluid but if the fluid does reappear, the lung is now splinted by an exudate on its pleura so that a tightly fitting tube may be inserted between the ribs and constant drainage instituted without the danger from a sucking wound. Evidence that such drainage is not clearing up the case is an indication for a thoracotomy and opening up of all pockets with the subsequent use of the Carrel-Dakin method of disinfection. 2. Empyema complicated by a lung abscess of appreciable size is treated by the resection of five or six inches of rib, including the periosteum, so that no bridge of new bone will interfere with satisfactory drainage. The opening into the abscess may frequently be identified but it must not be drained with gauze or tube because of the danger of rupturing the pulmonary vessels. The Carrel-Dakin method is not of use here because of the bronchial fistula practically always present. The insufflation of oxygen, two drops a second for forty-eight hours, is of distinct value. Blow bottles, or simpler still, rubber bags to inflate are to be used for the distention of the lung. When the cavity is practically gone and nothing but a fistula remains, bismuth paste injected once will usually bring about a quick healing. 3. Chronic empyema with thoracic fistula must be explored through an intercostal incision and division of ribs over the cavity. This procedure has also been employed with success by the writer as a primary operation where the patient was not too ill to stand the operation. It allows of the complete opening of all the pus pockets and well prepares the way for the Carrel-Dakin treatment used afterwards. The warning against filling the cavity under any pressure of fluid whatever is emphasized. 4. Traumatic empyema, resulting from infection, without hemothorax, and from infected hemothorax, is mentioned only to lay stress on the poor prognosis even with the most careful surgery.

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RESPONSE TO ADDRESS OF WELCOME

On behalf of the Association by Harry G. Steele, Bluefield, W. Va.

Charleston, W. Va.,
May 24, 1921.

Mr. President, Ladies, Surgeons and Fellow Practitioners:

I was dumbfounded on receiving orders from our worthy colonel, a few days ago, saying I was to reply to the address of welcome to be given by Mayor Grant P. Hall, of this wonderful city of Charleston, and Dr. W. W. Tompkins, of the Kanawha Society, and you men who have been in the army know that "orders are orders and you had better obey or you might find yourself court- martialed and put in the guard house for six months. I am not a speech-maker and never expect to be, but this, to me, is a very high honor, and I appreciate the invitation more than this vocabulary of mine is able to express, so here goes:

And now, Mr. Mayor and Dr. Tompkins, we accept your hearty welcome, and know we are going to enjoy your West Virginia hospitality to the utmost. Since you invited us to hold this meeting in Charleston I know you will be as good to us as Congressman Hughes promised us he would be, when he invited us to Pence Springs. You know he told us he would have plenty of refreshments on hand.

Now, you, Dr. Nicholson and Dr. Tompkins, and a few others, when you took me out here on the campus this morning and whispered in my ear—if you'll remember, I failed to promise that I wouldn't tell, so here it is: They said their latch strings would always be out for physicians of West Virginia, and if I wanted to take any of you around their cellar door key would be at our disposal, to enter their sanctum sanctorum, and you can imagine the rest.

Well, Doctors, I know you will find the physicians here in Charleston a bunch of good fellows. A few weeks ago, while attending the school of venereal diseases here, I took luncheon with some of these jolly

M. D's, at the Kanawha Hotel, and they had a real "get-together" meeting. They made me feel right at home; in fact, they make me feel more and more at home, and they seem more like real home folks to me every time I come to Charleston.

If we physicians throughout the state would have more of these "get-together" meetings we would drown out so much of that animosity that exists in our profession, which has no more right to exist than I have to come up and bing you right on the proboscis.

WE MUST PULL TOGETHER.

Co-operation creates perfect conditions. It is the spirit that draws out the best in everybody connected with the practice of medicine or any business or profession. It increases individual and collective capacity; it encourages us and generates energy; it destroys personal antagonism; it forges bonds of friendship; it intensifies effort; it fans every little spark of enthusiasm into a flame that fires the imagination of the store body. We have come here to impart knowledge, to absorb professional information and to pull together.

Several years ago, when the Mingo, McDowell and Mercer County Societies entertained this State Society, we assessed each of our members $10.00 per head, and did our utmost to show you a royal good time and give you the best to eat that money could buy in our community, but I believe you expect to go us one better. Ladies and Gentlemen, I understand this Society has assessed each of its members $20.00 per capita, and have raised something like $2,000.00. They have good cooks here in Charleston, for I have eaten at some of the hotels and some of their homes, therefore, I can vouch for their wives being splendid cooks. Folks, I know we are going to have a good time.

Right here I want to say to you, mothers and fathers: When you have sons or daughters ready for college, send them to the West Virginia University, and when your son decides to follow in your footsteps and take up medicine, send him to Morgantown for his first two years. We have just as good university as you will find anywhere in this or any other country, and Dr. Simpson and his staff will give them as good two year course in medicine as you will find in any medical college in the United States, and as there is nothing any better than we have in this United States you may know they are going some up at Morgantown. They will help build up the University, they will save money, as they can go to school at Morgantown cheaper than anywhere out of the state. Then, when they graduate in medicine from from some medical school, and go out into this wonderful state of ours to put forth their best efforts in the grand old profession, they will be thrown in with their classmates and mingle among their school chums anywhere over this dear old state of ours they may roam.

How many of us went to school together at Morgantown or Baltimore? How many of us met each other while taking a post graduate course at John Hopkins, Rush Medical, Chicago, Philadelphia, New York, or Rochester, Minn.? It has been a help to us having attended our own university, and it will be a help to your boy as well.

While at John Hopkins Medical School, several months ago, I also witnessed a few operations and clinics at "The Church Home," conducted by my good friend, Dr. Thos. S. Cullen, the gynecologist at Hopkins. and glancing over some of the history charts I found three out of five patients were from West Virginia. Now let us stop that. If you are compelled to send your patients out of the state for diagnosis, treatment, or an operation, I am partial to the very able men at Johns Hopkins, but it is not necessary, often times, for us to send our patients out of the state. We have good diagnosticians, dexterous surgeons, fine specialists, and efficient internal medicine men, if we just know whom they are and where they live.

We talk of the illustrious Washington, the patriotic Henry, the virtues of Lee, and the victories of Grant, the unmoved, inflexible conscience of Lincoln. We follow the great practical experience of Sims, the rapid and successful surgeon and great teacher, John B. Murphy, we treat many of our patients after the therapeutic advice of Osler, but we must not forget the great surgeons and physicians who are still in our ranks today—the Mayoes, Ochsner, Finney, Kelly, Cullen, Crile, Barker, Thayer, Simon, Cabot, and many, many others, whose instructions, advice and monuments of what they have done and are still doing will remain with us long after they have taken their departure to that place of abode where they will rest forever.

Above all we must not forget our efficient men here at home, here in our own state of West Virginia, who can diagnose most obscure cases, who can treat very troublesome diseases, and who can do wonderful operations with just as dexterous skill and results as marvelous as those noted men mentioned above.

Let me appeal to you, men, when you find a difficult case you can't make a satisfactory diagnosis of, the treatment you are administering is not bringing about the desired results, or its an inoperable case, or one you are afraid to tackle, call in your neighbor, if your patient is too sick to be taken to him. If he is able to be moved, as many hundreds are, who are taken to Rochester and Baltimore, take him to Wheeling, Huntington, Clarksburg, or bring him to Charleston, and if the able men in these cities can't make a diagnosis or can't satisfy you and your patient in a therapeutic or surgical way, bring them to Bluefield and we will do our best to help you out.

Many of our efficient men are not known throughout the state. We have splendid surgeons, we have good internal medical men, we have fine pediatricians, we have good obstetricians, dexterous gynecologists, and some of the best eye, ear, nose and throat specialists in this country. Why not patronize home talent and do unto our neighbor as we would have them do unto us.

"Life's such a short trip after all
  Let's make it sweet and snappy,
Not forgetting that true happiness
  Is in making others happy.
For the wheels of compensation
  Are as just and fair as mothers,
And give back to us in kindness
  Just what we ve done for others."

And now, my fellow M. D's, from Charleston: In behalf of the best Medical Society in the United States, I thank you again for your kind invi-

tation to have us meet here in the capitol of our state and enjoy your delightful hospitality, closing with this short poem:

THE PRAYER OF THE PHYSICIAN

As long as mortals have the nerve
To pray for things they don't deserve,
As long as conscience has a stain,
The prayers of men will be in vain.
So humbly, Lord, we ask of Thee
The princely gift—Sincerity,
And may we use it in this position
To make of us a better physician.
And should we crave for gifts more royal,
Please make us, God, a bit more loyal,
That we may give to those we serve
A measure full as they deserve.

And make us rich with eager zest
To give our our patients our very best,
To help the worthy, reject the beat
Who worries our brain and tired feet.
O Lord, in mercy intervene
To keep our hearts both pure and clean,
The will to give a man a lift
Make this, O God, our perfect gift.

RUPTURE OF UTERUS.

Read at Fifty-fourth Annual Session West Virginia Medical Association, Charleston, May, 1921, by Chester R. Ogden, M. D., F. A. C. S., Clarksburg, W. Va.

Report of case of complete rupture at term from pituritary extract.

Rupture of the Uterus might suggest to most persons a badly managed labor. This is not always the case, for undoubtedly there are many instances in which this accident is unavoidable. It is to be supposed however, that a great many if not a majority of such accidents could be avoided if obstetricians were more considerate of conditions and circumstances in connection with each case of pregnancy and labor.

There are three periods to be considered in which rupture of the uterus may occur: (A) during pregnancy; (B) early in labor; (C) after labor has been protracted. It goes without saying that uterine rupture is a very serious complication of pregnancy.

Since this complication is followed by such a high fetal and maternal mortality, it is indeed fortunate that it is a rare incident or is at least uncommonly met with.

There are and can not be any definite figures as to its relative frequency, and while the literature on the subject is quite abundant, its frequency varies very widely in the consideration given it by different writers, from one in 300 cases to one in 5000 cases.

Taking into consideration the experiences of those who have had opportunity of observing large numbers of pregnancies and labor and allowing for that no small number in which the accident is not detected and in deaths where no autopsy is performed, it is safe to affirm that this complication occurs once in about 1200 cases.

Rupture of the uterus may be complete or incomplete. Rupture during pregnancy which is thought to be the most frequent, occurs in cases where the uterus has been previously injured. Caeserian section naturally suggests itself to us as playing an important role in its causation.

But there are other injuries to the uterus to be considered as probable causes, such as perforation by the curette, the sound or by any sharp penetrating instrument, causing it to rupture or give away at the point of

injury during a subsequent pregnancy. The removal of an adherent placenta may predispose to uterine rupture. In such cases the operator may damage the wall of the uterus with his fingers and the wound healing by granulation, leaves a weak spot. Fibroids and other new growths protend to rupture. Injuries, blows upon the abdomen, falls, etc., during pregnancy have been the cause of this accident. In such cases the rupture is in the upper part of the uterus. The infantile uterus has been thought to predispose to rupture, but this must be very rare for the reason that such women are usually sterile.

As to the cause of rupture occurring early in labor, it is to be noted that the subject has become better understood since Bandl's writings on the Lower Uterine Segment have been considered. He has given us a clearer conception of the pathological anatomy of the subject. The upper part, that is the body of the uterus, is really the only portion that is active in labor, it alone forces the child by its contractions down through the parturient canal, the lower segment and the cervix playing but little part in this procedure.

In labor the vertical direction of the body of the uterus becomes diminished and Bandl's ring which marks the lower limit of the upper segment or body of the uterus and the upper limit of the lower segment, becomes further and further drawn up. The lower segment is in a more or less fixed position by its attachments and the upper part being free and therefore increasingly retracted, we find that in a protracted labor this area between the upper and lower segments, viz: Bandl's ring, becomes more and more stretched and thinned out, and being unable to be stretched farther, the tissues already bruised between the head of the child and the bony pelvis, it gives away spontaneously, from operative manipulation or from the use of a powerful oxytocic.

A large per cent of cases undoubtedly occur from bony deformities of the birth canal. The accident occurs in most cases where the deforminty is slight, being either overlooked or considered trivial, while in the more pronounced and visible deformities, recourse is made to the termination of labor by selected operative measures. Malpresentation is especially to be considered as a cause of rupture occurring from attempted version after the waters have escaped and the shoulders of the child become impacted. Other malpresentations such as face and brow are causes of rupture.

It is dangerous to attempt to deliver a child by forceps in these positions for the chance of rupture is considerable. Hydrocephalus and any other condition in which there is a disproportion between the passage and the passenger, may lead to rupture. Rupture of the uterus early in labor constitute the most interesting group of cases. In such cases it must certainly be due, partly from disease, and, partly from effects of previous injuries to the uterine wall.

As rupture occurs eight times as often in the multipara as in the primpara, it must be that the frequent overstretching and the thinning out of the uterus leads to this condition. There are two varieties of uterine rupture, viz: complete and incomplete. By the first is meant a laceration that

extends into the peritoneal cavity, and, by the other, that which stops short of the peritoneal cavity. This distinction is important because the treatment differs in the two groups. Complete is more common than the incomplete. A great many of the incomplete ruptures are not detected, while the complete cases are more easily determined because of the grave symptoms ensuing. Kerr gives four cases of Incomplete and ten Complete; Merz in his collection reports, 46 Incomplete and 181 Complete. The ruptures during pregnancy and early labor are usually complete. The bladder is scarcely ever involved in rupture.

How can we detect rupture of uterus? The Clinical pictures of rupture of the uterus differ according as it occurs in pregnancy, early in labor or after labor has been in progress for some time. In the former, according to most writers, there is seldom much warning of its occurrence, while in the latter, often for some little time before its occurrence, there are symptoms which are sufficiently pointed and which if interpreted should lead one to suspect threatened rupture and to take every precaution possible to prevent it.

It would naturally be expected, as with rupture of any viscus, that the rupturing of the uterus would be followed immediately by severe abdominal pain, collapse and symptoms usually presented in internal hemorrhage. When these symptoms are present the nature of the accident is self-evident; but, too often the condition is not fully appreciated because the symptoms are not plain and the accidents go unnoticed; but, sooner, or later, in all cases, symptoms arise—pain is increased and the patient presents the abdominal facies with a continued and steady increase in pulse rate. It is a striking fact that in a great number of cases reported, the rupture was not recognized till after the birth of the child. The classical symptoms of the sudden feeling that something has given away, of cessation of uterine contractions, of alteration in size and shape of the abdominal swelling, of hemorrhage and collapse, are very frequently absent; nor is this to be wondered at, considering that in many cases the child's head is already engaged in the pelvis and the rupture so often takes place during delivery. The amount of hemorrhage in rupture varies greatly. One author states that only three of his cases had severe loss of blood. Ivanoff in his collection of 124 cases found 53 fatal cases from hemorrhage and most of them not till several hours after the accident.

Prognosis: This is more favorable today than in former times when the accident was treated expectantly. At least 90% of cases treated expectantly die amongst the cases of complete rupture. In recent years with the adoption of active surgical treatment the mortality has fallen nearly one-third. It is still high, 65 to 75 per cent for complete rupture and 40 to 50% for incomplete.

The treatment consists of preventative and active measures. Should any of the premonitory symptoms of rupture arise the child should be delivered carefully and promptly. In deformities of the pelvis the relative size of the fetal head and pelvis must be carefully calculated and corresponding treatment adopted. In neglected transverse presentations, it

should be remembered that the position should be corrected as early as possible. If for any reason the accoucheur does not see such a case before labor is far advanced no attempt at version should be made unless there is every chance of the child being easily turned, for if not, it may lead to disastrous results and further delivery should not be attempted with the patient only partly anaethetized.

There is a difference in opinion as to how we should deal with the child if it is still undelivered when rupture takes place. If the head is presenting it should be delivered with forceps. If a breech presentation and one or both legs can be seized, the child should be delivered by traction. If the child has escaped into the abdomen it must be removed by abdominal section. In no event should the child be delivered till the operator is ready to perform any operation the case demands. If he intends to open the abdomen and the child is engaged, or otherwise, it usually acts as a plug and prevents bleeding in a great degree, so the delivery should be done per vaginam, if possible, immediately preceeding the abdominal operation, so that there may be no unnecessary loss of blood, and besides if the child is dragged up through the abdominal incision, there is danger of spreading the infection. Opinions also differ as to performing sub-total hysterectomy of complete hysterectomy. Much depends on the condition of the patient and the extent of the rupture. This must be left to the judgment of the surgeon. Supravaginal amputation seems to be more satisfactory for the reason that it takes less time, which is such a great factor in these cases. When the rupture extends well down into the neck of the uterus, and a ragged stump would be left by subtotal hysterectomy, it would be better to do the complete operation, thus getting rid of more surfaces liable to infection.

Report of Case.—Rupture at term following pituritary extract operation and recovery. Mrs. J. O. Italian woman, age 41, mother of ten living children, was brought to St. Mary's Hospital, Clarksburg, W. Va., February 10, 1921. Her history showed that she had never had any difficulties in labor, was well nourished and had always enjoyed good health. The patient had been in labor some little time before Dr. Goff, her attending physician, saw her, which was about 4 P. M. of that day. Dr. Goff gave the following report: labor had been in progress some time when he was called.

Examination showed complete dilatation of the cervix, the bag of waters had ruptured and the child's head well engaged in the bony canal. As the pains were very weak and the woman complained of being tired out, she was given one ampule of pituritary extract intra muscularly, and two strong pains immediately followed after which there was a quiet. The patient soon complained of being dizzy, faint, weak, showing signs of shock and prostration. An unusual tumor was detected in the abdomen to the right of the uterus. As soon as notified by the physician that he had a supposed case of rupture of uterus, I hurriedly dispatched the ambulance to bring her to the hospital and in the meantime made ready at the hospital for the operation. Owing to bad condition of the roads at that time of the year, there was much

delay in getting the woman to the hospital and it was not until 7 P. M., two and one-half hours after the accident, that operation was performed. The patient's condition was so very grave when she was placed on the operating table, that we expected her to expire at any moment. Normal sterile salt solution was started in the medium vein of the arm and general ansesthesia given. The child was quickly delivered per vaginam by forceps and the abdomen opened immediately following. A large amount of blood escaped and on examination the uterue was found to be completely ruptured on right lower aspect—from the junction of upper and lower segments or the ring of Bandl' for some distance toward the fundus and down into the neck. In addition, there was a transverse tear extending partly across the neck, leaving only about one-half of the cervix attached to the bladder. The bladder was not injured. Sub-total hysterectomy was performed, the stump covered by the peritoneum, blood clots removed and about three pints of saline solution introduced into the peritoneal cavity. Altogether about 1500 C. C. of saline solution was given into the mediam vein of the arm during the operation. The abdomen was closed without drainage. The time consumed in the operation was about 23 minutes. The patient was put to bed and very active supportive treatment given. She soon showed signs of improvement and made a smooth and uninterrupted recovery, leaving the hospital 21 days after operation.

I feel that much credit is due the attending physician for recognizing the accident early and for the effort he made in getting operative measures instituted.

Comment:—The pituritary extract was employed in the usual manner, under conditions quite favorable and in the presence of well established indications, yet with this accident resulting. This report shows the danger from the use of hypophyseal extract in labor, especially in the doses usually given, even under favorable conditions.

SECRETARY'S NOTE.

A timely paper, a proper rebuke to large doses of pituitrin, a warning to physicians and a help to the public. He covered in detail and completely the causes of rupture and his treatment of his own case reported shows his ability to deal with the difficult situation. He emphasized especially the prevention of this fatal accident and the history of the cases he gave from literature was interesting. It was freely discussed by Drs. Bloss, Henry, Maxwell, Wise, Carr, Bonar, Steele and Morgan. Dr. Bloss quoted Dr. Davis of New York as saying "Pituitrin was a discovery of the devil and could not come into his hospital," and reports two cases. Dr. Wise says instruments used at the proper time would prevent many cases of rupture, while Dr. Carr would prefer Caesarean Section, Bonar, many men are not fit to do obstetrics and that I never use forceps till complete dilation. Dr. Steel prefers instruments to pituitrin, primipera should never be given pituitrin, and he who gives it is a criminal.

EDITOR'S NOTE.

I cannot let the statement that "he who gives pituitrin to a primipera is a criminal' go unchallenged. If one gives full doses (IC. C.) to either a multipara or primipara before cervical dilation is complete it does seem the statement is good. However, two or three minim doses very frequently help primiparae most wonderfully.

Like all God-sent remedies this must be be well diluted with common sense—the rarest mental product there is.

THE WRITING OF MILK FORMULAS.

Read at Fifty-fourth Annual Session West Virginia Medical Association, Charleston, May, 1921, by C. L. Holland, M. D., Fairmont W. Va.

To those who are familiar with the composition of human milk and cows milk it is evident that while the percentage of fat is approximately the same in each, the percentage of sugar is higher, and the percentage of of proteine lower in human than in cows milk.

In order to have the different food elements in a modified cows milk correspond more nearly, in their proportions, to the same elements in human milk, and thereby more readily meet the nutritional requirements as well as the digestive capacity of the average well baby, it is necessary that the proportion of these different food elements be changed.

It is manifestly impossible to make a modified cows milk that is identical with mothers milk, and indeed this is not primarily the object, and though it may contain the same food elements in the same proportions, it is not the same milk, being biologically different.

The most logical as well as the most satisfactory way of making a formula for a modified cows milk is by thinking and calculating in percentages of the various food elements being put into the mixture.

It is evident that the simple dilution of cows milk will in no way change the relation of these various fool elements.

When a modification of cows milk has been made, after the manner above suggested, it is not to be supposed that the formula contains the various food elements in the exact proportions that have been calculated, especially when the modification has been made in the home, but they will be approximately correct, and nearly enough so for all practical purposes.

If while following this method the food be found to disagree with the child, the same method be used in changing the proportion of the different food elements, to meet the indications furnished by the symptoms in a given case, the modification will be relatively correct, even though the mixture contains a higher or lower percentage of some of the various food elements than it is supposed to contain.

It has been found that when milk is allowed to stand, the fat being of a lower specific gravity rises to the top, while the sugar and proteine remain approximately evenly distributed throughout the mixture.

The cream when separated contains a relative high percentage of fat and a relative low percentage of sugar and proteine in comparison with whole milk; while the skimmed milk will contain a relatively low fat and a relatively high sugar and proteine when compared with whole milk.

It is necessary, however, to set forth a somewhat arbitrary formula for each of these, which can only, in the nature of things, be approximately exact. They are nearly enough correct however for practical purposes.

We will consider therefore that when the whole of the cream has been removed from milk and the same thoroughly mixed, it has a composition of 16% fat, 4.50% sugar and 3.20% proteine. While thoroughly mixed skimmed milk contains 0 fat, 4.50% sugar and 3.20% proteine.

Let us suppose then that it is desired to prepare a food for a baby three months old, weighing 11 pounds or 5 kilograms.

We will suppose, further, that it is desired that this food contain 3% fat, 6% sugar and 2% proteine, with lime-water 20% in relation to the milk and cream in the mixture.

Suppose also it is desired to feed the child at 3 hour intervals, during the day and 4 hour intervals at night, or a total of 7 feedings in 24 hours.

The gastric capacity of a child of this age and size will be about 4 ounces. He will require then 7 feedings of 4 ounces each, or a total of 28 ounces in the space of 24 hours.

It is always wise in preparing a baby"s food to make up an exact feeding, so that if in the process of handling or pasteurizing a bottle should be spilled or broken, we will still have a sufficient amount of food for the day.

This extra feeding is only to be used in case of such accident, and is otherwise to be discarded, beginning with a new mixture each day.

This extra 4 ounces added to the 28 ounces, gives 32 ounces, or the total amount of food mixture to be prepared.

We will find then that in order to obtain 3% of fat in a 32 ounce mixture from a 16% cream, it will require 3/16 of 32 ounces or 6 ounces of gravity cream.

This 6 ounces of cream has a proteine content of 3.20% and brings to our mixture 6/32 of 3.20% or .60% of proteine.

It is desired, however, to have 2% of proteine in the mixture, which leaves the difference between 2% and .60%, or 1.40%, which must be derived from skimmed milk.

Skimmed milk having a proteine content of 3.20%, it will require 1.40/3.20 of 32 ounces or 14 ounces of skimmed milk.

This 14 ounces of skimmed milk added to the 6 ounces of gravity cream gives a total of 20 ounces of milk and cream in the mixture.

This milk and cream mixture has a sugar content of 4.50% and brings to the total food mixture 20/32 of 4.50% or practically 3% of sugar.

It is desired however to have 6% of sugar in the mixture. We must therefore add 3% in the form of dry milk sugar or Dextri-Maltose, as may be desired.

We will require then 3/100 of 32 ounces or 96/100 ounce, or for practical purposes 1 ounce of milk sugar or Dextri-Maltose.

It has been found that 1 level tablespoon ful of milk sugar weighs about 1/3 ounce, while Dextri-Maltose is slightly lighter. It will be necessary then to add to the mixture 3 level tablespoonfuls of milk sugar or Dextri-Maltose.

The lime-water content being 20% in relation to the milk and cream in the mixture, we will require 20/100

of 20 ounces or 4 ounces of lime-water.

Our formula when written will call for:

Gravity cream, 6 ounces.
Skimmed milk, 14 ounces.
Lime water, 4 ounces.
Sterile water, 8 ounces.
Milk sugar, 3 level tablespoonfuls.

If after feeding this formula a few days, some casein curds make their appearance in the stools, it may be decided to add some barley starch or other cereal for the benefit of its colloidal action on the casein of the milk.

Barley water is commonly made by boiling one level tablespoonful of barley flour in one pint of water for 30 minutes adding enough water to make one pint when finished. This gives a 1.50% decoction of barley starch.

It has been found that in order to obtain the desired colloidal action on the casein of the milk, the starch must be present in the proportion of :75%. Less than this will not have the desired effect, while more is not necessary.

In order to get .75% of starch into a 32 ounce mixture using a 1.50% barley water, we will require .75/1.50 of 32 ounces or 16 ounces.

We have already in the mixture 6 ounces of cream, 14 ounces of skimmed milk and 4 ounces of lime-water, a total of 24 ounces, leaving room for only 8 ounces of barley water. If therefore we make the barley-water with two level tablespoonfuls of flour to one pint of water, giving 3% decoction of barley starch, and replace the 8 ounces of sterile water in the mixture with 8 ounces of this double strength barley-water we will have starch present in the desired amount.

This extra .75% of starch added to the 6% of sugar already present, will make the total carbonhydrates 6.75%.

Having written the formula, it will be well to ascertain if the amount of food proposed to be given has a caloric value sufficient for the needs of this child, and also whether or not there are a sufficient number of grams of proteine to cover the proteine needs.

In 28 ounces of this mixture, which is the amount proposed to be given, there are 840 C. C. This contains 3% of fat, or approximately 25 grams. The caloric value of fat is 9.3 calories per gram. The fat content will therefore afford 25x9.3 or 232.5 calories.

The sugar content being 6% of the mixture, it will be found to contain 840x.06 or 50.4 grams of sugar.

The proteine content being 2% we have also 840x.02 or 16.8 grams of proteine.

The caloric value of a gram of sugar is slightly less than 4 calories, while the caloric value of proteine is somewhat more than 4 calories per gram, but for the sake of convenience, they may both be reckoned as containing 4 calories per gram.

The caloric value then of the fat and proteine will be 50.4 plus 16.8 or 67.2x 4 or 268.8 calories.

This 268 calories added to the 232 calorics contained in the fat gives 500 calories as the value of the amount of food being fed.

We added as an after-thought 2 level tablespoonfuls of barley-flour to the mixture, which has a food value of approximately 50 calories to each spoonful, or a total of 100 calories:

We are, however, only utilizing 7/8

of tmis amount or roughly, 85 calories. This 85 calories added to the 500 calories in the original mixture makes a total of 585 calories in the amount of food being given.

It has been found that a child of this age, in health requires from 100 to 120 calories of food for each kilogram of body weight every 24 hours.

This child weighs 5 Kg. and is getting therefore 585 divided by 5 or 117 calories per Kg., which should be quite sufficient.

The proteine needs of this child are from 2 to 2.5 grams for each Kg. of body weight every 24 hours. He will be getting 16.8 grams divided by 5, or slightly more than 3 grains for each Kg. of body weight.

The excess of proteine above the theoretic body needs will not in all probability be sufficient to cause any disturbances.

The calculation of the percentage of the different food elements in the various other milk modifications sometimes used, for such example as those in which whey is used as a diluent; or one for a marasmic infant, requiring a very high caloric intake, of a lactic acid milk in which corn syrup is used to increase the carbohydrates, or a proteine milk being used in some intestinal disorder, will present slightly greater difficulties, but can be done with equal facility when certain fundamental considerations have once been mastered.

CENTRAL PNEUMONIA."

Read at Fifty-fourth Annual Session West Virginia Medical Association, May, 1921, by Harry M Hall, M. D., Wheeling, West Virginia.

This exceedingly simple title has been selected for this paper because altho it is neither scientific nor dignified it is at once essentially descriptive of that kind of Pneumonia which it is the province of this paper to bring to your attention.

Perhaps no paper read here will have as little of what passes as current high class medical literature in it as this one. No new tests will be introduced, no complicated procedures spoken of, and nothing requiring any especial technique will adorn its pages.

Notwithstanding the foregoing Central Pneumonia is a relatively common condition, is very little written about, if at all, and yet is something any man who is practicing in West Virginia may run upon tomorrow and the diagnosis of it, will be as fraught with complexity as anything I know of.

Three of the cases presented here all had two or three men entirely baffled for a short space of time, came nearly to the operating table and had so little as pathogomonic symptoms to recommend them, that no one felt that they were negligent in the narrow escapes they came so near being a party to.

So I say again in presenting this subject no attempt is made to prepare a paper conspicious for any other quality than to warn and remind against a clinical picture that the writer feels sure occurs many more times than any of us are aware of, making a condition that not only tries our best clinical traditions, but I feel sure is often mistaken for other things with no doubt oftentimes resulting death to the patient.

Oftentimes too it may be true little can be done to arrest the process after you have made it out altho, I am not one of those who believe Pneumonia in

interstitial tissues and that, as in the experiments of Cecil and Blake, where they injected virulent cultures of the pneumoccocci into the trachea below the larynx all the symptoms of a Pneumonia beginning centrally were produced. In these experiments pneumococci were found in periods approximately twelve hours after in the blood stream, before symptoms developed, but nevertheless producing no doubt the extreme weakness malaise and the like in the monkeys that we see in man before the lesion is made out.

Hepatization also began in the center and moved outward.

It has been suggested that resolution in Lobar Pneumonia occurs because, on account of lack of blood, acidity of the tissue so affected is increased and the pneumococci are killed in this acid area, whereas if it again be made alkaline they resume their growth and flourish. Perhaps for some reason akin to this process the rapidly spreading pneumococci invading the hilum and walled off in Central Pneumonia and become a condition in the nature of a bronchial abscess or a lobular mass in pure Broncho Pneumonia. In any event it at first asserts itself at the bedside similar to an on coming abcess of the appendix or elsewhere only to present later symptoms of a straight frank lobor pneumonia.

The above explanation therefore is offered as a tentative explanation of Central Pneumonia. That it is pneumonia which has been brought to a reduced rate of progress and whereas in straight Lobar Pneumonia the lesion rapidly reaches the periphery—in Central Pneumonia it ceases or is very much slowed and instead of waging fiercely the battle its course of progress is more slow but nevertheless destructive.

The same causes for lowered resistance such as exposure, weariness, other infective diseases, and the like operate with Central Pneumonia. The types are doubtless the same. The blood picture the same, except that the white count might be expected in many cases to be lowered or merely approximating an acute appendix or abcess elsewhere.

The treatment of Central Pneumonia is no different from any other Pneumonia except until the diagnosis is established it is very trying to meet symptoms at once so mystifying vague and obscure. An exceedingly virulent Central Pneumonia walled off as it is by some biochemic alteration probably carries off many patients whose deaths might be ascribed to pulmonary oedena or pulmonary embolism, so quick might the invasion be, yet I dare say most of them are fortunately slow and if the leucocytosis be 25,000 to 35,000 probably have a low mortality of 5 to 8%. Having disposed of these several facts which might easily be written of any Pneumonia, the main object of the paper will be approached, namely, to establish the diagnosis.

My first experience with the process was many years ago when I called in consultation for a case of appendicitis which I hesitated about sending in for operation. As usual doubt and wavering in the attending physician produced doubt in the family and as I could give no reason for my doubt, it being of the so-called "hunch" variety, I called in consultation. Dysponoea and some cyanosis appeared and a cough developed. This led to a

any form or type should be left to its own devices; but the altogether important thing is that the processes which will confuse in making a diagnosis oftentimes call for operation with the result your patient suffering from a highly dangerous Pneumonia may have an ether Pneumonia in addition, not to speak of possibly shock, damage to the heart and chagrin at finding a normal appendix.

In any other Pneumonia it would probably be almost superfluous to get upon this floor and read a paper on its symptoms and diagnosis.

Not a whole lot has been either taken away or added to Pneumonia, its dianosis and recognition in the last ten years.

Sudden pain, a stitch in the side, temperature (very often but not necessarily high) cyanosis, dysponoea, rales, dry and sibilant, dullness on percussion, early expectorating of viscid mucous, probably tinged with red and becoming rusty, fremitus, and the like, early help to tell the tale.

But the crux of the whole situation is that nearly every one of the above may be absent or present in Central Pneumonia.

If all of them, or even a major part of the above symptoms were present it is at once apparent there would be no need of this paper. It is possible to have every one of them absent and have a Central Pneumonia which will have advanced and progressed to considerable size.

There is no reason why a Pneumonia should not be central. In fact it has been suggested all "Pneumonias" begin centrally, and spread rapidly toward the periphery by way of the perivascular, peribronchial and fear of impending disaster from a perforated appendix and resulting periotonitis. However the abdomen, tho almost forced to yield such symptoms refused to do so. Consultation advised waiting too. Next day all abdominal symptoms were gone and we had a Pneumonia, altho it was based on clinical, not physical signs.

The next case some years ago stands out as what may be expected where no laboratory or X-Ray is to be found. A colleague who had taken ill asked me to see one of his cases, a small boy of about eight, who had had the measles, with apparent good recovery, but who had next developed signs of middle ear disease, if not mastoid. Examination by me revealed almost nothing except a high temperature, subject to slight exacerbations and remissions. During remission patient was happy and contented, during rise at times delirious. No progress having been made and as child's mother was at Terra Alta, I began to fear a T. B. C. meningites, with possible other micro organism present. Consultation was called at 11 A. M. When he arrived at 4 P. M. crisis had occurred and child made a good rapid recovery. No physical signs were made out by any of us and the crises of temperature from 105 to 106 fell to normal inside of an hour.

These two cases offer little to help one.

The next case, not long ago, was sent into the free wards while I was on service for Typhoid Fever. Soreness and tenderness over the abdomen was the cause given for diagnosis. Patient also had some temperature and seemed to be very ill. White count was high. Widal negative. No other symptoms having been made

out, he was put on starvation diet, an ice bag placed over appendicular region and preparations made to have him referred to the surgical side for operation. Next morning a slight cough developed and he was sent to the X Ray, not really for a pulmonary condition, but to see if anything would interfere with his taking ether. Central Pneumonia was discovered. He was referred back, treated for Lobar Pneumonia and recovered.

In the female wards a case who had had appendix removed some time before, presented similar symptoms. Now the writer is like a good many of his colleagues in that when he finds a slight different lesion from the usual, he is loathe to call everything he comes across in the next day or so the same thing. I had a desire to X-Ray her, but was reluctant to yield to the impulse. The laboratory had done all in its power with Widals, blood procedures and the like to clear the case, operation was thot of for possible adhesions. No physical signs whatsoever. The interne, Dr. Finney, under my service, suggested she be X-Rayed any way. It was done and a beautiful radiogram of Central Pneumonia made out. She was treated for Pneumonia and made a good recovery.

The third and last case, that of a small baby, which failed to yield to any treatment and who resisted all formulas, altho the stools were comparatively good. An interne, Dr. Walker, plead for an X-Ray. As no symptom whatsoever of Pneumonia appeared, I felt it wasting a plate. He offered a wager he was correct, and the chance instinct rising. Child was X-Rayed and a Pneumonia, altho not central in the usual sense, but occupying a higher location, was found and a frank Broncho Pneumonia with a single invasion was treated.

This paper, therefore, reads like a comedy of errors. It might also suggest slowness to make use of clinical facts. As a matter of fact use was made of them and in their accepted sense, and in most of these cases, surely in the last three, diagnosis was made even more rapidly than we often do.

Possibly no procrastination in any of them occurred, nor delay, but we can see four of them nearly came to operation. When in doubt then, and surely we very often are, there is practically only one agencv that at present will aid you to make your diagnosis early in Central Pneumonia —that agency is the X-Ray, used by an expert and made to get the lung at the best possible angle.

I have gone to the trouble to consult other sources, and have within the last month communicated personally with one of the best clinical diagnostic laboratories in the country and asked if so far any other agency beside the X-Ray would aid in the diagnosis of this condition.

The reply was so far there has been none. So then we are still confronted with the fact that when you have a patient who appears very ill with possibly no pulmonary symptoms and only pain over the abdomen, without I dare say, in most cases rigidity, it is well before operating to at least include into the conditions to be excluded, Central Pneumonia. It cannot be long until rapid breathing, some mucous, and a cough will aid you, altho without the X-Ray I still think a mistake could be made.

It is idle to say all cases of suspected appendicitis should be X-Rayed because as a rule nausea and vomiting, rigidity and localized pain with possible opportunity for making out the offending organ by palpatation make to the average attendant a clear picture.

But wherever the temperature is high in the beginning there is no history of colicky pains, and the patient has an extraordinary high white count with dysponoea and the appendicular symptoms are mere tenderness only, if possible X-Raying should be accomplished. It is not necessarily hard on the patient and may serve an unnecessary operation performed at an inopportune time.

This paper is written solely from the clinical standpoint by one who depends entirely on others for his X-Ray work, and is based altogether on bedside experience.

BIRTH TRAUMA.

Read at Fifty-third Annual Meeting of West Virginia Medical Association, Parkersburg, May, 1920, by Dr. John M. Emmett and Dr. Robert J. Wilkinson. Huntington, W. Va.

Because of the frequent occurrence of birth traumata, the subject of intracranial injury to the newborn assumes vast importance. In the "Mortality Statistics" for the registration area of the United States for the year 1910, were reported 3,725 deaths from brain injury at birth. This registration area included only 58.3% of our total population. This means that from 1910 to 1920 we lost 64,240 children from birth trauma. These statistics did not include the many cases that withstood the immediate affects of the injury and later became physical or mental defectives.

It is impossible to discuss all of the factors which play a part in the etiology of this condition. It may be interesting to know that hemorrhages in the newborn are genarally sub-dural, in contra distinction to extra-dural hemorrhages attending adult trauma. This peculiarity is explained by the dense attachment of the dura to the skull in infants differing so decidedly from the loose attachment in adults. The few exradural hemorrhages in infants usually demonstrate themselves as haematomas under the scalp and are generally not attended by any brain symptoms. The sources of these hemorrhages are the large pial veins which empty into the longitudinal simus near the coronal and lambdoidal sutures, laceration of the longitudinal sinus itself or true destruction of brain tissue.

It is sometimes difficult to determine the location of the hemorrhage or its relation to the pre-and sub-tentorial fossae. A similar difficulty is incurred in differentiating the unilateral from the bilateral hemorrhages. An advance was made in localization when the symptom complex concomitant to pre-bulbar or sub-tentorial lesions was definitely established. It is in these posterior fossa hemorrhages that we find drowsiness, cyanosis, irregular breathing and rarely convulsions. The pre-tentorial cases cry continuously, are spastic on one or both sides, frequent convulsions are seen, twitching of the face, arms and legs, increased reflexes, bulging of fontinelles, slow pulse and the other evidences of extreme intracranial pressure. The time of onset of the symptoms following delivery is also

of diagnostic importance. The subtentorial cases show symptoms immediately or within a few hours ofter delivery. The anterior fossa hemorrhages are frequently free from symptoms for several days. It is of equal importance to determine whether these cases are unilateral or bi-lateral, as whether they are located in the anterior or posterior fossa. This differentation can be made in the early pre-tentorial cases by an exploratory needle and cannula, puncturing thru the outer angle of the anterior fontinell. We know of no more definite diagnosis in the prebulbar cases than a cervical or lumbar puncture.

The great majority of these cases are first seen by the general practitioner and usually they are considered hopeless, no surgical interference being considered. Birth trauma occurs most frequently in primiparas with a difficult or precipitated labor with or without instruments. These children may appear normal at first but the drowsiness, extreme restlessness, spasticity and convulsions soon follow. Probably the majority of these children will withstand the accute affect of the pressure without surgical intervention, but the resulting sequella are among our most distressing problems as medical men. When the actual pathology is recognized early and prompt treatment is instituted the prognosis in these children is good. Without operation they certainly remain defective either mentally or physically or both. Not infrequently the courts of our country have proven that birth trauma is a causative factor in criminals of national reputation. Infants stand operations well, provided not too much time is consumed and no great amount of blood is lost. Until after one month of age no anaesthetic is required.

Today the surgeon seldom sees these cases until later in life when the spasticiey has become marked and the mental degeneration is apparent. At this stage they present one of the most difficult surgical problems. When they consult us they have usually obtained medical advice from far and near. This advice has varied. A few of them have already had tendon cutting operations for the relief of spasticity. Occasionally they have been advised that section of posterior roots of the cords should be resorted to, while a limited number have been told that all surgical procedures are contra-indicated. We believe that the great majority of these cases should not be subjected to operation, however, a limited number of them show definite signs of brain lesions with unmistakable evidences of intracranial pressure. Such children should be benefitted by operation. A careful neurological examination should be made of all cases of birth trauma that come under our observation. The importance of a routine eye ground examination cannot be over estimated. Spinal punctures should be done and an estimation of the pressure recorded; chemical and bacteriological examination of the spinal fluid should be made. Neurological examination will frequently show definite localizing signs.

The pathology found in these children is most interesting. In the early cases a macroscopic hemorrhage is usually found and under such conditions the prognosis is good. Occasionally we are disappointed to find

only a cerebral odema, but we believe that the decompressive effects of the operation will enable these children to better take care of their increased amount of cerebro-spinal fluid. The pathology found in the latter cases is also distinct, but we are seldom able to offer such gratifying operative results. In the children that have had a large unilateral or bilateral hemorrhage in the anterior fossa we find a dense film spread over the corte. The brain is wet and odematous and naturally there is an appreciable amount of cortical destruction. The results following operation in such cases are not so gratifying as we might desire. A few of the late birth traumata show only a dense, thickened, adherent dura as a result of absorption of the old hemorrhage. Occasionally small local cysts are found which are easily enucleated. In one case we found a large cyst evidently a feature of a porencephalus. This cyst covered the entire right hemisphere of the brain. Of course a real porencephaletic cyst as a result of birth trauma with its grave developmental defects is sufficient to preclude any surgical benefit to the patient. Even a cyst of this type might increase to such an enormous size as to create alarming symptoms of intracranial pressure and to demand surgical interference if for no other reason than to prolong life and to save patient's eye sight. The choice of operation in the early case of pre-tentorial hemorrhages is a sub-temporal decompression done on the side of the hemorrhage. In case the hemorrhage is bilateral, then we believe that a double decompression should be done. The majority of hemorrhages into the anterior fossa are located in the parietal region. Clots covering any part of the anterior fossa can usually be removed through a sub-temporal incision. Such an incision has the advantage of exposing the corte under the belly of a strong temporal muscle, thereby minimizing the likelihood of resulting hernias and fungus cerebri. The pre-bulbar hemorrhages can best be treated by repeated spinal punctures done preferably in the cervical region. If a general brain odema occurs in the posterior fossa cases after spinal punctures have been resorted to, we believe a sub-temporal decompression should also be done.

What should be the surgeon's attitude with regard to the late effects of intrachanial trauma? These patients present themselves as spastic on one or both sides, epileptics or mental defectives. Occasionally they have all of these manifestations. We believe that all such children should have a careful neurological examination. The mental defectives should not be subjected to surgical treatment. They are best handled in an institution devoting its time to this work. The few patients that show definite localizing signs of brain lesions should have an exploratory craniotomy done over the sight of the pathology. The children with a monoplegic or diaplagic spasticity present a difficult problem. Those showing definite signs of pressure as demonstrated by repeated spinal punctures and pappillary odema should have the advantage of a sub-temporal decompression and later a course of treatment consisting of massages and electricity for the re-education of the muscles. Spasticity of the upper extremities can be markedly benefitted

by section of the posterior roots of the cord.

CASE HISTORIES.

Miss E. B., white, American, age 26, housekeeper, referred by Doctor McKenzie.

Family History: — Father and mother both living and in good health, two sisters living, one dead, patient was youngest of three children, no history of epilepsy or mental degeneration in family.

Previous History: — Mother was in labor about 18 hours; labor not difficult but unexpected. Mother was walking across floor in upright position when baby was born. Child fell upon head. Considerable difficulty encountered in reviving child. At two weeks of age mother noticed the baby was unable to use right arm and leg; both seemed spastic; baby cried continuously for one year. At 13 years of age she began having convulsions and from that time until August, 1919 she has had two or three convulsions every week. The seizures were most marked on the left side of the body and the right side of the face seemed drawn during the convulsions.

Present Condition:—In November, 1919 patient began having terriffic headaches, requiring opium for relief. She became irritable at times and often tried to injure her mother. These headaches have gradually grown worse.

Examination:—Shows a very well nourished young woman, except for spastic and drawn arm and leg. Examination caused the patient to become very irritable. Slight weakness observed in right eyelid. Right facial weakness. Positive Babinski, Oppenhiem and Gordon reflexes on left side. Eye ground examination shows choked disk of both eyes more marked in right. Field of vision distinctly contracted. Spinal fluid under considerable pressure, estimated 25 M. M. Mercury. Cell count and globulin reaction negative. Wasserman of spinal fluid negative. A diagnosis of cerebral tumor or cyst in the right motor area was made. Operation February 27, 1920, right subtemporal incision. Dura thick and fibrinous. A large dark cyst was found immediately under incision. This cyst included the greater portion of the right hemisphere of the brain. Enucliation seemed inadvisable. Anterior wall of cyst excised and linen strands inserted in cavity and brought out under belly of the temporal muscle. Wound closed layer by layer. Duration of operation, 40 minutes. Ether anaesthesia used.

Post Operative Notes:—Convalescence uneventful; wound healed throughout by primary union; patient had two convulsions the day following the operation; she left the hospital in ten days. Two weeks later she had two more convulsions. No headache since operation. No tendency towards irritability. Last seen on May 11, 1920. No further trouble. Patient feels well. Eye ground only shows an old chorioditis. No acute blurring.

H. D., American; age, 9 years; white.

Family History: — Father living and in good health; mother died of tuberculosis; two younger brothers, both normal children; several half brothers and half sisters; no history

of epilepsy or mental changes in family.

Previous History: — First child; difficult labor lasting 48 hours; child finally delivered with instruments; baby was cynotic after delivery. At four years of age child began having general convulsions which lasted one week. From two weeks of age until months of age the child appeared normal. The family claimed that between the sixth and seventh month patient developed twitching of the left side of the face. This twitching of the face was followed by convulsions in about one month. These convulsions have been continuous ever since, occurring 30 or 40 times a day. He has complained of intense headaches at intervals all of his life; his mentality has remained good and he has advanced as well as the usual child in his studies. He has not been able to attend school regularly because of his convulsions.

Examination: — March 27, 1920. Shows a well nourished boy. He is very irritable and rather unruly. Frequently during course of his examination he had slight convulsions more marked in his right side. lightly positive Babinski and Oppenhiem reflexes on right side; increased patella reflexes on right side. Patient has no local weakness; uses arms and legs equally well; eye ground examination shows a blurring of the disk on the nasal half with a distinct venous torturosity. Spinal fluid under pressure; negative chemically and bacteriologically. Blood Wasserman negative. X-ray examination of the head shows a thinning of the cranial vault with distinct convolutional impressions on the inner table. A diagnosis of old birth trauma with a probable external hydrocephalus was made. The family were advised that the prognosis in such a case was not good, but that we believed that the child might obtain some benefit from a decompressive operation.

Operation:—March 21, 1920. A left sub-temporal decompression was done. A very much thickened and tense dura was found. The cortex bulged considerably but after we elevated the temporal sphnoidal lobe and allowed a quantity of the cerebro spinal fluid to escape the cortex receded back in place. Duration of operation 35 minutes. Ether anaesthesia used.

Post Operative Notes: — For the first week after operation patient was free from convulsions, but after ten days his convulsions returned and within two weeks after operation he was having them equally as frequently as when he was examined. Examination May 19, 1920. Patient free from convulsions and apparently much improved.

C. B., white, American; age 13 months; referred by Doctor Lindsay Vinson.

Family History: — Mother living; health good; father died 1918 of pneumonia.

Previous History: — First baby; mother in labor 12 hours; no instruments; blue baby; convulsions continuous for first four days; mother thinks seizures involved principally the left side of the body and the right side of the face. After fourth day convulsions stopped, but it was noticed that the baby was generally spastic on both sides.

Examination: — December 6, 1919; shows reasonably well nourished

child; spastic on both sides; more marked on the left; left hand drawn and contracted; eyes crossed; feet crossed; slight lagging on the side of face and right upper eyelid; double Babinski and Oppenheim; eye ground examination shows pappilae odema in both eyes; spinal fluid under definite pressure. Wasserman negative.

Operation: — December 17, 1919; right sub-temporal decompression; dura tense and not pulsating; cystic film spread over right cortex.

Post Operative Notes: — Wound healed by primary union; patient was discharged from hospital at the end of ten days; examination at frequent intervals since that time has shown a marked improvement in the child. Eyes straight; baby able to sit alone; no unusual nervousness; she is able to say a few words. A left sub-temporal decompression was advised.

May 6, 1920, left sub-temporal decompression done. The pathology on the left side was similar to that found on the right, although not so marked. Duration of operation 40 minutes. Ether anaesthesia used.

H. H. S., white; American; age 2.

Family History: — Father and mother living and in good health; no history of epilepsy or mental degeneration in family.

Previous History: — First child; difficult labor; 12 hours; baby was cynotic at times of birth and cried continuously. At three weeks of age mother noticed that the child was generally spastic and apparently had very little use of lower extremities. At four months of age baby began having convulsions and since that time these convulsions have increased in frequency and severity. The mother believes that in the beginning the patient's face was always drawn at the left side during the seizures.

Examination:—Shows a well nourished child, unable to lift its head. Extremities tense and spastic. Every attempted examination caused a series of general convulsions. Child whined continuously. Eye ground examination shows a complete second optic atrophy. She was apparently completely blind. The mother claims that the baby was able to see until a few months ago. Lumbar puncture showed spinal fluid under tension. Wasserman on Spinal fluid negative. A diagnosis was made of intra-cranial pressure due to birth trauma with an associated external hydrocephalus. The mother was advised that no surgical intervention would be of assistance to the child.

E. B. J., colored; American; age one week; referred by Doctor Summers.

Family History: — Father and mother living and in good health; no history of epilepsy nor mental defectiveness in family.

Previous History: — Mother in labor 48 hours; no instruments; considerable difficulty encountered in resustication of child; baby cried continuously for first week.

Present Condition:—At three days of age child began to have convulsions limited to the right side of body. Right arm and leg spastic and drawn.

Examination:—Shows a well nourished child weighing 7 pounds; right arm and right leg spastic; no atrophy; each time an attempt was made to do an eye ground examination the patient had a series of convulsions. Spinal fluid found under pressure.

Chemical and bacteriological examination negative.

Operation:—U. S. Marine Hospital, Quantico, Va., December 2, 1917; left sub-temporal incision; dura tense and dark and not pulsating. It was found after opening the dura that we had exposed a large cortical hemorrhage which was readily removed. No tendency to further hemorrhage followed the removal of the clot. A small rubber which was placed under the temporal sphnoidal lobe. The wound was closed in the usual manner, layer by layer. Duration of operation 45 minutes. No anaesthetic employed.

Post Operative Notes: — Wound healed by primary union. The patient's temperature went to 106 the night following the operation. The temperature elavation was not associated with any bad effects. No convulsions were observed after operation of patient. Last seen November, 1919. She was a bright and attractive child, walking without assistance. There was no spasticity of the extremities.

ANURIA.

Read before the B. R. T. Medical Society, April 6, 1921, by Joseph L Miller, M. D., Thomas, W. Va.

Anuria is an anomaly of the urinary secretion and is always secondary to some other condition—a symptom rater than a disease entity; but one that demands our utmost attention and effort when it occurs. It may be due either to intra or extra-renal causes, being either a complete absence of excretion or an "Obstructive suppression."

The true anurias are more rare than the mechanical and are usually associated with the acute nephritic inflammations due to some acute infectious fevers, chemical poisons, such as phosphorus, bichloride of mercury, turpentine, etc., and some cases are of reflex nervous origin, following catheterization of the ureters, removal of one kidney, hysteria, etc. This latter group naturally offers the most favorable prognosis.

The mechanical anurias are generally caused by the blocking of the ureters by renal stones, malignant growths, torsion of ureter, etc., at first causing merely retention, but eventually checking the renal function and ending as a true anuria.

The only condition to be differentiated is vesical retention, which is easily settled by using a catheter.

A most surprising feature of absolute anuria is the almost complete absence of symptoms during the earlier days of he condition. Osler says: "There may be very little discomfort, and the symptoms are very unlike those of ordinary uraemia." As time goes on the patient usually complains of some headache, weakness, slight nausea, and toward the end becomes somnolent and finally dies after a brief coma. Generally convulsions are exceedingly rare, occurring in only five of the forty-one cases collected by Herter. Only six of these cases had headache, and twelve showed vomiting. As a rule oedema is absent. Respirations are deepened. In the greater number of cases the prognosis is of course unfavorable. The obstructive cases live longer than the others, some of them as much as two to three weeks. Elsner says of one of his cases (an old man): "Both ureters were plugged with stones, the patient lived two

weeks without secreting urine; never had a uremic convulsion, vomited during the last days of his life and died without uremic dypsnoea.""

Anuria from hysteria or reflex nervous causes is rarely ever fatal, though we are told to regard with suspicion some of the cases recorded of a complete anuria lasting several weeks or months.

Elsner says that anuria due to non-obstructive suppression of the kidney function other than those of nervous origin leads to death in most cases, unless relieved, in from three to five days.

I have had two cases of complete anuria, but wish to report in detail only the more recent one. The first case occurred in a girl about nine years of age who was very sick with Scarlet Fever. She died in complete coma about thirty-six hours after the catheter showed the bladder empty and some forty-eight hours or more after the last voiding.

CASE REPORT.

Case II. Mrs. G. R. B. Previous history as follows: Had been more or less of an invalid for several years. Had a ventro-fixation in Philadelphia four years ago, after which was very much improved for six or eight months when she had a severe fall and a return of her symptoms. Suffers all the time with obstinate constipation, and for last six months with insomnia, says she did not average over two hours sleep a night.

She went to bed the second of January with what was at first thought to be an attack of Influenza, but which later was diagnosed as Typhoid Fever —diagnosis made from temperature curve, nose bleed, rose spots, and Diazzo. One Widal made, but faulty technique in obtaining blood serum and very old stock solutions probably accounts for a negative result. Chemical analysis of urine gave usual findings in Typhoid. Temperature ran usual curve and touched normal during fourth week. From the beginning urine was very scanty and infrequent, averaging about ten to twelve ounces in twenty-four hours.

She voided about two ounces about 5 A. M. of the 16th day of the diseases and from that time until the afternoon of the 21st day there was a complete cessation of excretion from the kidneys. One hundred and thirty-five hours after the last voiding about eight ounces were obtained through catheter. In the afternoon of the fourth day, or 115 hours after last voiding, the bladder was found empty when catheter was introduced; and about the same time on the fifth day it was still empty so far as percussion and palpitation showed. This was a very satisfactory examination as patient was very thin and no tympanitis.

During the entire time of the anuria nurse kept a very careful watch for signs on the linen of involuntary voiding or with the one stool obtained during this period, both being entirely negative.

During this time the only additional symptoms presented were some increase in the headache, slight nausea, a small amount of delirium at times. No edema.

After failing during the first two days of the anuria to excite the kidneys to resume their function by means of alkaline diuretics increased fluid intake, and pituitrin, she was put on fifteen grains of Diuretin every four hours and four ounces of

warm normal saline through rectal tube every two hours. She retained practically all of the ten pints of fluid injected, only once or twice did any of it seem to come back after an interval. After the second day I was afraid to let her go without an attempted elimination through the skin, so gave her a heavy sweat every twelve hours by means of three large electric hot pads placed about her body. After the kidneys resumed work it was necessary to use catheter for a week or ten days, and in spite of the utmost care and Urotropin, she developed a catarrhal cystitis that proved very annoying. Some three weeks after she was convalescent and sitting up the greater part of each day she suddenly developed a severe infection of the right kidney, with severe rigors, temperature went up to 104 to 106. Kidney exquisitely tender and painful. Urine loaded with pus cells. I then sent her to Dr. Hunner at Johns Hopkins, where she is now being treated by catheterization of the ureter and injections of silver solutions directly into the pelvis of the kidney.

This case is of particular interest because of the exereme rarety of anuria as a complication of Typhoid Fever. It is not mentioned in Anders, Osler, Thompson, Musser, Griffith, Kerley, and two or three older works to which I have access. Dr. Hunner also tells me that she almost establishes a record for recovery after the great length of time with complete anuria. Anders alone speaks of acute nephritis as a complication occurring in Typhoid Fever and says he has seen two cases in his own practice arising during the fastigium, both of which proved fatal. He says that Amat collected twelve cases, ten of which proved fatal.

This case was also of particular interest because of the numerous complications that had to be met during the progress of the disease.

Next in importance to the anuria was a myocarditis that was present almost from the first. The pulse for the first few days ran from 80 to 92 and very weak, but by the end of the first week it had climbed up to a range of 120 to 130, with a systolic pressure of 90 and a diastolic pressure of about 50. She fainted if she attempted to turn on her side, or raise her head from the pillow, and had the sensation of floating in the air. This complication naturally led to the next one, namely, a hypostatic congestion of the lungs.

In the third week of the disease she was taken with a severe pain and tenderness over the right mastoid, that persisted until after she was out of bed. For a few days it looked as though operation would be necessary.

The insomnia that she had before going to bed persisted in an exaggerated form all during her illness, and I found it practically impossible to relieve it. On one occasion gave her as much as a grain of morphia during the night without any effect other than a slight drowsiness. Fifteen grains of chloral and thirty grains of bromide would sometimes give from one to two hours sleep. Four ounces of whiskey on one or two occasions put her to sleep for three or four hours. Veronal gave the most uniform results, and fifteen grains generally gave her as much as four hours sleep. Hyoscine seemed to increase the nervousness.

The West Virginia Medical Journal

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the professiou are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local uewspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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IN MEMORIAM.

Dr. Gustave A. Aschman.

Again Wheeling is called upon to mourn the loss of one of her distinguished physicians. On September 2nd Dr. Gustave A. Aschman died from uremia, following an attack of nephritis. Some weeks before he had a stone removed from his kidney, and had so far recovered from the operation that he was taken from the hospital to his home.

Dr. Aschman was born in New York city, April 3rd, 1860. His father being a Swiss, the son was sent to Switzerland to be educated. He was graduated A. B. from the university of Geneva in 1880, and after taking two years of the medical course in the same school, he was graduated in medicine from the university of Zurich in 1884. After his graduation he took courses of post-graduate instruction in Vienna, Berlin and London, and returning to his home city he served two years as clinical assistant to the late distinguished ophthalmologist, Dr. Knapp. After practicing for a time in Youngstown, Ohio, he married Miss Harden of Wheeling and located in that city in 1890, as a

specialist in ear, nose and throat diseases.

No one in the city ever began his life work with better preparation than did Dr. Aschman. He served for years as a member of the medical staff of the City Hospital, was state medical director of the A. O. U. W., was president of the Ohio County Medical Society, for several years secretary and then president of the State Medical Association. For several years he served as a member of the Board of Regents of the state hospital for the deaf, dumb and blind. He was long a member of the vestry of St. Matthews Episcopal Church, and took very active interest in the work of the church. Dr. Aschman was an accomplished scholar, a well-equipped physician, and a high-toned Christian gentleman, whose place in the community it will be difficult to fill.

S. L. JEPSON.

Those of us who have been attending the meetings of the State Association for the past fifteen years or so, remember Dr. Aschman. We extend to our brothers of the Ohio County Society our heartfelt sympathy in this loss of another of its prominent members.

THE STATE BOARD OF EXAMINERS FOR NURSES.

Thanks to the kindness of Dr. Hupp, we have received a copy of the questions asked at the recent examination held by this board. It is very earnestly desired that the physicians of the state read these questions, which are printed elsewhere in this issue, over with great care.

To us this seems to be an eminently "fair" examination to be given to nurses applying for the honored R. N. These questions certainly show quite a broad scope in the line of quizzing, and yet there is not one which the conscientious graduate of a good training school should not be able to answer.

A very interesting sequel would be to know how many passed; what their grades were; what some of the answers were, and what hospitals made the best, as well as the poorest showing.

Some of the graduates, and registered too for that matter, nurses we have met would surely not be able to make the required grade on this examination, simple and practical though it is.

There is a grave question in our mind, however, if this is altogether their fault. In some instances it has seemed to us that they have been robbed of three years' time and have not been adequately compensated in the instruction given them. In short, they have been given a rotten course of lectures and training. Really they deserve credit for doing as well as they have, but that does not make them safe or capable. It is hoped that the Board will elevate the standard of the teaching and training offered in the Training Schools for nurses in West Virginia.

AGAIN THE SHEPPARD-TOWNER BILL.

There seems to be an idea abroad that we as physicians are trying to "pull something" by opposing this bill. How in the name of Heaven they can figure we are going to be able to "grind an axe" is beyond my comprehension.

Just now there has come to us a copy of the speech of the Hon. James A. Reed of Missouri, delivered in the Senate of the United States on "The Maternity Bill." It is advised that every member of our State Association secure a copy of this speech and read every word of it. It will prove wonderfully enlightening.

These spinsters try to make us (the people) think that we have not taken care of the mothers of our land. Oh! my God! and we sit up hour after hour. We scrub our hands to the quick. We break ourselves up buying rubber gloves. We beg and plead that they come to us as soon as they even suspect they are pregnant, that we may watch and advise them. We take care of them during their confinement. We guard their convalescence. Then we are told by a lot of unmarried females who are non-mothers, that we do not know our business. Maybe we do not, but we are trying to educate the people of our community to the fact that obstetrics is the "biggest and most important specialty there is."

I do not believe that the majority of the men in our profession realize the damnable perniciousness (if I may coin a phrase) of this proposed legislation. And it is not that there is any hope of personal gain that your editor opposes it so violently. Personally he has no "axe to grind," it is just a very bad piece of fanatical altruism of the German and Russian type.

Get the dope and write President Harding, our Senators and your Congressman.

By all means read Senator Reed's speech.

THE RIGHT OF THE PHYSICIAN TO TREAT HIS PATIENT WITHOUT IGNORANT LAY INTERFERENCE.

On this question the medical profession must stand united. On this issue depends the future of medical practice. When laymen acquire the power to direct, vise and circumscribe the regiment of physicians in their medication of the sick, the doctor's usefulness ends and the sooner he realizes it the better for him.

Lay regulation of medical practice is well exemplified in the Harrison law, the Volstead act, the proposed Sheppard-Towner Maternity bill, and many other measures that have been attempted to be enacted into law in most of the states and in the national government. These are beautiful examples of lay attempt to regulate medicine. A proper protest against lay dictation in medicine was recently passed by the therapeutic society, assembled in convention at Washington, D. C., and was sent to President Harding and Congress. The protest was against further legislative interference with medical treatment; that attempts by paid propagandists with no medical training, to dictate to legitimate practitioners what agency they shall or shall not employ for the relief of their patients, was absurd and presumptuous and prejudicial to public interests. The aim of these propagandists is to replace competent medical responsibility with the incompetent irresponsibility of laymen. This is an insulting invasion of the professional prerogative and a gross injustice to the sick who are entitled to receive whatever drug in the judgment of their doctor may aid them to get well.

We insist that the best interest of the public demands that the medical profession be permitted to continue without sacrifice of domestic privacy, personal free choice, self-respect or self-reliance; without transfering control from medical scientists to political opportunities without overburdening the sick citizen with expense; without swamping the state with a deficit each year of one hundred million dollars as Compulsory Health Insurance will do. Without subordinating the agencies of healing to political domination under compulsory health insurance, state medicine or national socialization of medicine; and without clubbing them into subjection or innocuousness with a coercive medical practice act which invests an administrative department with punitive judicial power of suspension and revocation of license without corresponding judicial responsibility to any appellate court.

We should be better organized so that we may have a true concensus of medical thought on those subjects which concern our profession particularly, and which react adversely on the people generally.—Ed. Illinois Medical Journal.

State and General News

DR. H. M. REPPARD.

Dr. Reppard died in Middlebourne, where he was the leading practitioner, on October 9th, as the result of injuries received when his automobile, which he was cranking, ran over him and dragged him about forty feet. The doctor at the time of his death was President of the Tyler County Medical Society. For a number of years he served as County Health Officer, and was one of the most active and efficient in the State. He was very active in the M. E. Church, and a man greatly esteemed throughout the county. He will be sadly missed.

GOLDEN WEDDING CHARMING AFFAIR.

Dr. and Mrs. Samuel L. Jepson Celebrate Golden Wedding Anniversary.

At their home in Woodlawn Wednesday evening Dr. and Mrs. Samuel L. Jepson celebrated their fiftieth wedding anniversary. A host of friends responded to the invitations extended a few days ago, and called to congratulate them and wish them many more years of happy wedded life. The home was a veritable bower of summer blossoms, yellow (denoting the golden anniversary) predominating, and were gifts from thoughtful and well-wishing friends. Dr. and Mrs. Jepson were assisted in receiving the guests by their four daughters—Mrs. Louis Sutton, of Clarksburg; Mrs. Charles W. Bates and Misses Ada and Jennie Jepson, all of this city.

Dr. Jepson and Miss Isabel Scott were married September 14, 1871, at the home of Mrs. Jepson's sister, Mrs. H. C. Welday, in St. Clairsville, by Dr. R. M. Taylor, then president of Beaver college, where Mrs. Jepson graduated. The bridal party was composed of Miss Ada Bates and Miss Etta Lawson, of Wellsville, Ohio; Mr. R. J. Barr and Mr. I. F. Jones. Miss Bates and Mr. Barr afterwards married. Dr. Jepson had just graduated from the old Washington college, now known as Washington and Jefferson.

There are several interesting facts relative to this celebration. Dr. Jepson's father and mother, Mr. and Mrs. John Jepson, celebrated their fiftieth anniversary, having been married 64 years; his brother, Nathaniel Jepson, and wife celebrated the same anniversary, and the oldest brother, George, and wife of St. Clairsville, will be married fifty years in December, when they expect to be at home to their many friends.

Dr. Jepson is the oldest practicing physician in the county, and a prominent member of the Ohio County Medical Society. He served for some time as State Health Commissioner, during which time he and his family were located in Charleston. A remarkable circumstance connected with the genealogy of this family is the fact that all the daughters, son-in-law, and grand-children, are living. The grand-children are Messrs. Louis Sutton, Jr., Samuel Jepson Sutton, and David Van Dorne Sutton of Clarksburg, and William Jordan Bates, Samuel Jepson Bates and Charles William Bates, Jr., of this city.

Dr. L. H. Clark of Kyle, W. Va., attended the Shriners' meeting at Huntington.

Dr. W. H. Holstein, formerly of Milton, has located permanently at Griffithsville.

Wanted.—One copy of February, 1921 issue West Virginia Medical Journal.

Dr. C. L. Mowrer, formerly located at Elk Ridge, W. Va., has moved to Hagerstown, Md.

Dr. Thomas Hallanan of Barboursville, died October 15th, at his home, after a brief illness.. Dr. Hallanan, a member of the distinguished Ohio family, was born in Dayton. He came to Cabell county soon after his graduation in medicine, and began practice in this county. He was endowed with a love for newspaper work, and more than once forsook the more lucrative field of medicine for journalistic enterprise. He was on the staff of the Dispatch, Huntington's first morning newspaper, and was for a number of years an interested and interesting contributor to local newspapers.

As a physician he ranked high. He was a good samaritan who sought to do good rather than attain riches, and to the people who found it hard to secure medical service and equally hard to pay, he was the constant servant and friend. Dark nights and muddy roads in hundreds of cases attest the bigness of heart of Dr. Thomas Halanan. His unexpected death will form a deep shock to his host of friends and the hundreds to whom his professional life has been a benediction. He is survived by his widow and two sons, Walter S. Hallanan of Charleston, state tax commissioner, and John Hallanan, a prohibition officer.—Herald-Dispatch.

The Roll Call of the American Red Cross for the renewal of membership in the organization, will be held November 11 to 24.

Dr. and Mrs. C. F. Hicks of Bluefield, and Dr. and Mrs. W. D. Hicks of San Antonio, Texas, were recently guests of Dr. I. C. Hicks and family of Huntington.

Dr. W. C. Covey has moved from Sullivan to Goodwill.

Dr. H. G. Steele of Bluefield, has returned to his practice from a short vacation.

Dr. Thomas R. Harris of Parkersburg, has been appointed a member of the State Health Council by Governor Morgan.

SENTENCED FOR ILLEGAL OPERATION.

It is reported that Dr. Graham W. Scott, who is awaiting an appellate court ruling on a sentence of from one to seven years given him for performing another illegal operation, has pleaded guilty to performing an illegal operation on Elizabeth Schulte, which contributed to her death, has been sentenced to seven years in the Ohio state penitentiary.

PROGRAM OF THE FIRST ANNUAL SCIENTIFIC SESSION

Of the Section in Neurology and Psychitary of the Southern Medical Association, November 14th.

Part 1.

A Symposium of Early Detection on Mental Disorder.

1. An Evaluation of Intelligence Tests, invited guest, Professor Fletcher of Tulane University and Sophie Newcomb College.

Discussion.

2. Early Recognition of Mental Disease, Dr. Roy M. Chapman, Sheppard and Enoch Pratt Hospital, Towson, Md.

3. Psycho Neuroses in their Incipiency, Dr. Sidney Schwab, St. Louis, Mo.

4. Early Manifestation of Psycho Beuroses, Dr. Louis E. Bisch, Asheville, North Carolina.

Discussion (of above three) opened by Dr. Bondurant, Mobile, Ala., and Dr. Somerville, Memphis, Tenn.; Dr. S. Roberts, Atlanta, Ga., and Dr. Bliss of St. Louis, Mo.

5. Psycho Neuroses in Public Health Hospitals, Dr. Benton, Miami, Florida, U. S. P. H. S. Hospital, Gulfport, Miss.

Discussion, Dr. W. W. Graves, St. Louis, Mo., and others.

NEUROLOGY.

Part II.

1. Chairman's Address: The Treating of Neorology, Psychistry and Psychopathology, and their Relation to General Medicine and Other Specialties, Especially the Eye, Ear, Children, Orthopedics, Gastroenterology and Genito Urinary Disease.

2. The Pathology of Pellagra, from Clinical and Neuropsychiatric Aspects, Dr. W. M. Bovis, U. . D. H. S. Hospital, Augusta, Ga.

Discussion, Dr. R. N. Greene, Jacksonville, Fla., Dr. E. P. Bledsoe, P. H. S.

3. Muscular Atrophies and Dystrophies Contrasted with Emaciation, Dr. Beverly Tucker, Richmond, Va.

Discussion, Dr. W. W. Graves, St. Louis, Mo.; Dr. Sidney Schwab, St. Louis, Mo.

4. Presentation of a Patient with Progressive Lenticular Degeneration, Dr. M. L. Graves, Galveston, Texas.

5. A Peculiar Case of Hysteria, Dr. E. Bates Block, Atlanta, Ga.

Discussion, Dr. Sidney Schwab, St.

Louis, Mo., and Dr. Houston, Augusta, Ga.

Demonstration of Specimens, charts etc.

Dr. Richard O. O'Dell of South Charleston, and Miss Edna M. Spath of York, Pa., were married at Wheeling September 1st.

John Augustus Sanders, Herndon, W. Va. Medical College of Virginia, Richmond, 1917; was instantly killed when the automobile in which he was riding skidded down an embankment at Huntington.

Dr. and Mrs. C. L. Holland of Fairmont, left recently for Boston to spend a few weeks. Dr. Holland will take special work on diseases of children at the Harvard Medical College. Mrs. Holland will visit friends near Boston and Cape Cod.

On October 12th examinations were held at various points in the State by the members of the State Board of Examiners for Nurses.

At Wheeling conducted by Drs. F. L. Hupp and Harriett B. Jones.

At Keyser by Dr. Chas. S. Hoffman.

At Charleston by Dr. Preston.

At Bluefield by Dr. Irene Bullard.

Miss Jessie A. Clarke, R. N., a graduate of the Massachusetts General Hospital, who served four years in active service in France, and Flanders, is now Superintendent of the training school of the Ohio Valley General Hospital of Wheeling.

Society Proceedings

Mercer Healing Springs,
Athens, W. Va., Aug, 24, '21.

The Mercer County Medical Society met in the dance hall immediately after supper and the president called the meeting to order at 7:00.

The secretary read the minutes of the previous meeting and after a few corrections they were adopted.

The program was opened by Dr. William S. Robertson, Charleston, W. Va., on "Some Urological Considerations," and I will say here, the doctor of Mercer county who was not present to hear Dr. Robertson's very clear and instructive lecture and see the well developed X-Ray plates on foreign bodies in the urinary bladder and dilated and obstructions in the ureters certainly did miss a rare treat. Dr. Robertson was enthusiastic on this subject and he delivered the lengthy lecture in a very enthusiastic manner. Here are some of the points he left with us as best I can remember:

(1) Special training and thorough training is the only way to get results.

(2) There is no such thing as no complicated cystitis.

(3) Very rarely do we have any pain in the back when we have kidney trouble.

(4) 25 per cent of right kidney stones were operated upon for appendicitis in the Massachusetts General Hospital.

He related where a diagnosis was made of appendicitis, the appendix was removed, but still the pain remained. Later on a stone in the ureter was discovered. One man had had as many as three operations before

the correct diagnosis was made and the cause removed.

(5) If pus is found in the urine and no bugs present you have either gonorrhoea or tuberculosis of the kidney.

(6) Tuberculosis of the genito-urinary system is the most hopeless. The patients go down hill very rapidly.

() Some of your pyelitis cases are due to some focal infection, such as tonsilitis or infected teeth.

8) Pus and blood in the urine are merely symptoms. Search for some disease. Hematuria is always a dangerous sign.

Cause of hematuria from the kidney:

(a) Scarlatina.
(b) Drugs.
(c- Protozoan.
(d) Infarcts.
(e) Stone.
(f) Papilloma.
(g) Diverticulitis.
(h) Tuberculosis is the most serious.

Renal reflex is where the other kidney becomes hypertrophied. He showed the following:

(a) Paraffin, a piece the thickness of a lead pencil and an inch long, taken from a bladder.

(b) A hair pin removed from a bladder.

X-Ray plates. A kidney catheter coiled around in the lower part of the ureter. The catheters in both ureters. A catheter in the ureter showing a stricture.

Several very good drawings of the base of the bladder.

Dr. O. Hare commended Dr. Robertson very highly on this instructive lecture and demonstration.

Dr. Wallingford asked Dr. Robertson if he tries to dissolve the renal calculi. Dr. Hicks commended Dr. Robertson and said he appreciated his talk very much. In answering Dr. Wallingford's question Dr. Robertson said there was nothing that can dissolve these stones in the kidneys or the ureters. It is possible to facilitate the passage by injecting into the ureters olive oil, glycerine or something of that nature.

He said a leucocyte count, the temperature of the patient and urinary analysis are a great help in making a diagnosis.

Next on the program was Dr. J. Howard Anderson, of Marytown, W. Va., President of the West Virginia State Medical Association, who read a very complete, instructive and interesting paper on cancer. As we expect to have this paper printed in our State journal the secretary did not take many notes. In discussing this subject Dr. Kirk said the only treatment we know for cancer is destruction. Dr. Hare said this was a most excellent paper. Most of these patients come to us for diagnosis. Dr. Thornton compared a cancer to a locust tree: Cut down the tree and the roots will spread; peel the bark off the tree and it will die, roots and all. He preferred the treatment with chloride of zinc instead or arsenic. Your secretary said he was doing all he could to teach his patients to take advantage of all the prophylatic measures possible by having lacerations of cervix and perineum repaired early, small lumps of the mammary gland removed as soon as discovered, etc.

Dr. Anderson in closing said he could not see any comparison of cancer with the locust tree.

"Cancer has but one cell and the multiplicity of that one cell." Diagnose them early, remove and remove the associated lymphatics.

Dr. Chas. E. Easley, of Bluefield, was elected a member of this Society.

Dr. Percy J. McElrath, of Bramwell, was reinstated as a member of this society.

The October program was read as follows:

Dr. C. C. Ballard, Gap Mills.

Dr. W. W. Rixie, Princeton.

Dr. C. C. Peters, Princton.

Dr. Chas. A. Easley, Bluefield.

Dr. Carl W. Smith's application was received.

In addition to twelve members we had present the following visitors:

Dr. Wm. . Robertson. Charleston.

Dr. J. Howard Anderson, Marytown.

Dr. A. H. Griggs, Beckley.

Dr. Chas. S. Smith, Beckley.

Dr. J. E. Clemons, Beckley.

Dr. Forest Puckett, Beckley.

Dr. L. M. Davis, Wyco.

Dr. Wm. B. Sisson, Princton.

Dr. E. F. Thompson, Princeton.

Miss Schober, of Mountain View Hospital, Bluefield.

Mrs.———, of Memorial Hospital, Princeton.

Adjourned at 9:10 P. M.

H. G. STEELE, Secretary.

SEPTEMBER MEETING MERCER COUNTY MEDICAL SOCIETY.

The monthly meeting of the Mercer County Medical Society was held at Bluefield in the new Chamber of Commerce rooms in the Masonic Temple, on September 22nd.

The meeting was called to order by the president, Dr. W. C. Slusher, and owing to the absence of the secretary, Dr. Steele, Dr. Hare acted as temporary secretary.

Due to a misunderstanding as to the place of meeting, there were but very few members present, and all business matters to be brought before the Society were deferred to a future meeting.

A very interesting paper, entitled, "Psycho-Analysis," was read by Rev. Burke, of the Sacred Heart Church. Rev. Burke had an excellent paper which showed that he had given his subject considerable study and thot. There was quite a little discussion and in elucidating, Rev. Burke gave an account of his own case. An illness which extended over some two or three years and which proved to be beyond the help of ordinary medical practice, but which, was finally relieved by analysis.

Rev. Burke also stated that he he treated quite a number of patients by analysis and had been able to relieve several of these cases of their symptoms and restore them to normal health.

Several other papers on the program were not read because of the absence of the members writing them.

Mr. M. P. Shawkey, School Superintendent, of Beaver Pond District, and Mrs. Viola Workman, the school nurse, came before the Society asking us to assist in forming some plan for the physical examination of school children. The matter was turned over to a committe to report upon the best and most feasible means of handling the question.

The Society then adjourned, the date and place of the next meeting to be determined upon later.

DR. O. S. HARE, Sec. Protem.

Announcements and Communications

DR. G. A. ASCHMAN, PROMINENT SPECIALIST, TAKEN AWAY.

Wheeling Loses Man of High Rank in Medical Profession and Influential Church Worker—Ex-President of the W. Va., State Medical Association.

Dr. Gustavus A. Aschman, one of the most prominent specialists of the medical profession of Wheeling and a resident of the city for thirty years, succumbed at his home, 30 Maple Avenue, Woodlawn, at 12:20 Sunday afternoon. Dr. Aschman had been in ill health for several months past. Last spring he went to Florida in the hope of recuperating. He appeared benefitted following his return. Three months ago, his malady became aggravated and he was removed to the Ohio Valley Hospital. While there he improved to some extent, he was able to be removed to his home. For some weeks his condition was encouraging, but ten days ago he took a turn for the worse and sank slowly till the end came yesterday afternoon in the presence of his wife and immediate relatives.

Wheeling loses a most estimable citizen in the passing of Dr. Aschman, and while he did not grow up in this neighborhood, his very high principles and affable manner soon builded for him a wide friendship. The medical fraternity and members of St. Matthews church of which he was senior warden and a staunch supporter, will particularly feel his loss.

Dr. Aschman had attained the prominence in the practice of his profession. He was a man of high educational attainments and stood in the foremost ranks of practitioners of medical science.

He was born in New York City on April 3, 1860, the son of Frederick T. Aschman and Martha Davis Aschman. He attended the public schools in the metropolis and at the age of 18 went abroad and studied at the Trogen school at Trogen, Switzerland and the high school at St. Gaul, Helvetia. Later, in 1879 he went to Geneva and entered the university, finishing his preliminary course in medicine and receiving the degrees of B. A. and B. Sc.

In the spring of 1882 he entered the University of Zurich and after two years' study received his diploma, which included practice of medicine and surgery. Subsequently he spent two years in attending lectures at the celebrated institutions of Vienna and London and Berlin and after his return to the United States in 1886, he became assistant clinical surgeon under Dr. Knapp at the New York Aural and Ophthalmic college. In April, 1890, he located in Wheeling, where he has since engaged in the successful practice of his profession.

On April 23, 1889, he married Miss Ida E. Harden, daughter of Percival Harden, a native of Wheeling. He and his wife were devoted members of St. Matthew's Protestant Episcopal church.

He organized and was a member of St. Matthew's choir, which is composed of 50 male voices and has gained wide fame.

He was ex-President of the State Medical Society of West Virginia.

In addition to his widow, Dr. Aschman is survived by one brother, Frederick Aschman of Beaver, Pa., and

two married sisters, one living in Paris and the other in California.

Mrs. Gertrude Coleman of Chicago, and Mrs. Percival Harden of New York, sister and brother respectively of Mrs. Aschman, and Mrs. Walter Bonitz of Pittsburg, a cousin, arrived in the city before Dr. Aschman's death.

Funeral services will be held on Wednesday afternoon at St. Matthew's church with Rev. R. E. L. Strider officiating. Interment will be in Greenwood cemetery.

ASCHMAN RITES WEDNESDAY.

Funeral services for Dr. G. A. Aschman, whose passing away on Sunday last at his home in Woodlawn caused widespread sorrow, will be held Wednesday afternoon at 3 o'clock in St. Matthew's church. It is in this church where he served as vestryman for many years and was also a senior warden. In view of the fact that Dr. Aschman was one of the founders of the vested choir of St. Matthew's and one of its oldest members, the choir will participate in the services. Rev. R. E. L. Strider will officiate, using the Episcopal full service for the burial of the dead. The choir will sing the chants and several selections from the hymnal. The body will lie in state in the church from 2 o'clock until 3, the beginning of the services. His fellow vestrymen of the church, will act as pallbearers, namely, Messrs. J. J. Holloway, B. W. Peterson, N. P. Whitaker, J. W. Ewing, A. C. Stofel, R. M. Browne, J. G. Hearne and Peebles Tatum. Interment will be private in Greenwood mausolenm.

MEDICOS MOURN LOSS OF CONFRERE.

A special meeting of the Ohio County Medical Society was held last night at the University Club to take appropriate action regarding the death of Dr. G. A. Aschman. The presence of nearly every member of the large organization testified mutely to the high esteem in which Dr. Aschman was held by his fellow practitianers. Dr. McGregor, president, presided at the gathering, and Dr. Armbrecht, secretary, was in his place. A number of physicians present who were close to Dr. Aschman during his long and honorable career in Wheeling, gave oral testimony to the character of the man, who not only had been an active worker as member and president of the local society, but also had been secretary and president of the state association.

Before adjournment the following resolutions were adopted:

The Ohio County Medical Society has met again to mourn the loss of one of its oldest and most faithful members.

Dr. G. A. Aschman has passed away after a three months' illness, and the Society wish to express their sorrow and their sincere sympathy with his devoted wife and his family.

Dr. Aschman was a gentleman and a scholar. He was careful, conservative, conscientious practitioner of his specialty and his opinion and treatment could always be relied on for the best interests of his patients.

Dr. Aschman was honorable and upright in all his dealings. He was original, frank and honest in the expression of his opinions on all subjects.

He was a consistent Christian gen-

tleman, and gave constant and devoted service to his church. He was always honestly and sincerely interested in municipal and national politics, and was always ready to do his full share for the advancement of his profession, for the good of humanity, and for the welfare of the community.

JOHN L. DICKEY,
S. L. JEPSON,
J. SCHWINN,
Committee.

It was decided by members of the society to attend the funeral in a body by assembling at the church a half hour before the obsequies are held.

—Wheeling Register.

QUESTIONS

Asked by the State Board of Examiners for Nurses, Oct. 12, '21.

1. (a) Give three causes for sudden rise of temperature in children? (b) Name three parts of the body where the temperature may be taken?

2. (a) Give in detail the care of a prematurely born baby? (b) Differentiate between the cry of an infant suffering from (a) colic, (b) temper, (c) hunger?

3. Name three diseases requiring special diet? What special foods are used in each and why?

4. (a) Name three nutritive constituents in food? (b) Mention foods which are rich in each of them? (c) Which food element yields the most heat? (d) Outline briefly post-operative diet for a gastro-enterostomy case?

5. Define sinusitis? Proctoclysis? Hypodermoclysis? Desquamation?

6. (a) Define catheterization? (b) Describe technic for catherizing female patient? (c) Dangers of faulty technic? (d) How would you recognize an over-distended bladder?

7. Locate the os calcis? The clavicle? The coccyx?

8. Differentiate between a patient in shock and one fainting?

9. (a) What are the three varieties of hemorrhage and how recognized? (b) In hemorrhage from a varicose ulcer would you elevate or lower the leg?

10. Describe briefly the symptoms of a patient bleeding internally, following a hysterectomy? What would you do?

11. Locate the sciatic nerve? The retina? The femoral artery? What artery is generally used in taking a pulse?

12. What are the early symptoms of pulmonary tuberculosis? In nursing a case, mention important instruction (a) for the patient, (b) for the family?

13. Symptoms of perforation in a case of typhoid fever? What would you do?

14. Give four symptoms of scarlet fever? Mention two common complications? Instructions for isolation?

15. Mention some of the signs and symptoms of approaching labor? Why is an obstetric case given an enema before advanced labor? Why is it necessary to examine the urine and blood pressure in the late months of pregnancy? Define eclampsia?

16. Name three anaesthetics? Who was William T. G. Morton?

17. Define fracture? Mention three cardinal symptoms of fracture? Name four different forms of fracture?

18. By what method of administration would you get the quickest action of a drug? Name a drug which causes dilation of the pupil One that causes contraction of the pupil?
(b) Dose of apomorphine?strychnia? sulphate? morphine sulphate? codein sulphate? tincture of aconite?

19. What are adenoids? Give symptoms that would indicate their presence?

20. What are the symptoms of beginning carcinoma of the uterus? Is cancer infectious? Is cancer hereditary?

21. How would you make and apply (a) mustard plaster? (b) a turpentine stupe? A compress to an infected eye?

22. (a) Define sepsis? asepsis? antisepsis? (b) What physical agents destroy bacteria? (c) Describe preparation of hands in making a surgical dressing?

23. Name six complications which may arise from a major surgical operation?

24. What is the Carrel-Dakin system of treating wounds?

25. Name three diseases for which there is a specific remedy? Mention these remedies?

During October the following articles have been accepted by the Council on Pharmacy and Chemistry for inclusion in New and Nonofficial Remedies:

Davis and Geck:—Kalmerid Germicidal Tablets, Potassium-Mercuric-Iodide.

Eastman Kodak Company:—Eastman Barium Sulphate for Roentgenology.

Powers - Weightman - Rosengarten Co.:—Copper Citrate-P. W. R.; Mercury Benzoate-P. W. R.; Mercury Cyanide-P. W. R.; Mercury Succinimide-P. W. R.; Silver Citrate-P. W. R.; Silver Lactate-P. W. R.

Solution Arsphenamine-Lowy: — This product has been acquired by E. R. Squibb and Sons, and is retained in New and Nonofficial Remedies as Solution Arsphenamine-Squibb.

NEW AND NONOFFICIAL REMDIES.

Acne Combined Vaccine-Lederle.—A suspension of killed acne bacilli and killed Staphylococcus albus and Staphylococcus aureus. For a discussion of Mixed Bacterial Vaccines, see New and Nonofficial Remedies, 1921, p. 314. Acne Combined Vaccine-Lederle is marketed in various size packages containing graduated doses of the vaccine. Lederle Antitoxin Laboratories, New York (Jour. A. M. A., Oct. 1, 1921, p. 1103).

Protolac.—A brand of calcium caseinate-M. N. R. For a description of the composition, actions and uses, and dosage, see Jour. A. M. A. Sept. 24, 1921, p. 1023. Dry Milk Co., New York.

Benzyl Succinate Seydel.—A brand of benzyl succinate-N. N. R. For a description of the properties, actions and uses, and dosage, see Jour. A. M. A., Sept. 24, 1921, p. 1023. Seydel Manufacturing Co., Jersey City, N. J. (Jour. A. M. A., Oct. 8, 1921, p.1183).

Copper Citrate-P. W. R.—A brand of copper citrate—N. N. R. For a discussion of the actions, uses and dosage of copper citrate, see New and Nonofficial Remedies 1921, p. 88. Powers-Weightman-Rosengarten Co., Philadelphia.

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THE PALLIATIVE AND RADICAL TREATMENT OF UTERINE FIBROIDS

Read at Charleston meeting of the State Medical Association. May, 1921, by Robert J. Reed, M. D., Wheeling.

By the term palliative is meant all forms and varieties of treatment, except the complete operative removal of the fibroid growth. By the term radical is meant the procedure of myomectomy or hysterectomy.

Some extreme enthusiasts using a certain method of non-operative treatment claim entire disappearance of the fibroid. The more conservative make the statement that only a great shrinkage of the tumor is accomplished. If we still cling to our reason, we will have difficulty in accepting the claim that fibroids of the uterus disappear absolutely, save by the surgical procedure. That in all non-operative treatment, a small nucleus of the original growth remains, is highly probable. It is therefore, within the limit of fairness to classify all agencies other than surgical as palliative.

In former years medicinal agents were used with persistency, ergot being the drug in which the greatest confidence was placed. The effect of this and of like remedies are now acknowledged to have only a slight and temporary influence, and they have remaining, few or no advocates.

For many years electrolysis and galvano-cauterization had in Apostoli and his followers very enthusiastic support and results were announced, which were seemingly as brilliant as those made in this latter day by specialists using modern agencies. But electrolysis, like remedies of the materia medica, has fallen into disuse.

As the fact became established that neoplastic tissue was vulnerable to the roentgen rays, these began to be used upon the uterine fibroid with gratifying effect, but often resulting in burns and other deleterious influences. Later when the discovery was made that by a filtering process, the soft rays could be eliminated and the penetrating hard rays

preserved, and these alone utilized, better results were obtained. In a few famous clinics, particularly in Europe, in Freiburg and in Berlin, the technic of the fibroid treatment by roentgen rays was perfected, and from these centres this method has been popularized.

But now that radium is available and has come into greater and more general use, it has been found to be distinctly more efficient in the treatment of fibroids than the roentgen rays and to a very considerable extent has supplanted their use in the treatment of fibroid condition. Radium accomplishes its work in two ways, by causing sclerosis of the ovaries and a precipitation of the menopause. It is only in rare instances that this is not the result. And second by producing degenerative changes in the blood vessels, as well as a similar influence upon the neoplastic tissue itself. Radium is being used in treatment of fibroid in many American clinics, but from two or three in particular,—from Baltimore and Philadelphia—come reports which are worthy of very serious consideration. The claims are alluring and should be carefully investigated, while at the same time we keep our feet upon the ground and our centers of logic clear.

The indications for and against its use as stated by gynecological specialists are fairly clear and definite. As stated by the radium specialists, they are less so, and in actual practice the radiographers seem indifferent to the question of differentiation, and for the reason which they explicitly give, that they are not gynecologists and must therefore rely upon the judgment of these specialists as to whether patients are suitable for the radium treatment or possess contra indications. If cases are referred to them, they, apparently, seem justified in drawing the inference that contra indications do not exist, radium treatment is given, and the responsibility rests upon the physicians who refer the cases. This situation makes it necessary, since this form of treatment must be administered mainly by radium experts, for all physicians to become gynecologists, who are to determine if radium is the proper treatment for the particular fibroid condition; or at least, we must familiarize ourselves very fully with indications which forbid the use of radium, and those which demand surgery.

Radium is contra indicated: 1. In fibroid tumors "larger than a three or four months' pregnancy." This is the position taken by Clark of Philadelphia, Taylor of New York and other gynecologists, but judging from the case reports of the radical specialists, this precautionary attitude is not always respected. 2. "In young women where tumors may be removed by myomectomy." This is a condition imposed also by Dr. Clark. 3. Where coincident pathological conditions exist, such as hydro and pyo-salpynx, ovarian cysts and neoplasms, ectopic pregnancy, adhesions appendicael and intestinal, indicative of former inflammation, degenerative changes in tumor or uterus, such as necrosis, suppuration, cystic degeneration, calcification and malignancy.

Abuot one-third of 500 cases of uterine fibroid studies by Deaver showed co-existing pathology. A like percentage is given in report made by Tracy, and 50% in a group of 120

cases studied by Arthur Beck. The majority of these conditions, it is generally conceded, will be aggravated by the use of radium, or followed by no permanent benefit.

There is little room for argument that the cases falling within these three groups possess contra indications to the treatment by radium. With respect to the second group, in which preference is expressed for myomectomy when this procedure is possible in women who have not reached the menopause, inference must be drawn that when myomectomy is not feasible, the use of radium is to be preferred to hysterectomy. In this position there is room for argument, and there is strong reason for defending the claim that every case below the menopause period, and because of this very fact, possesses the contra indication to the use of radium. If myomectomy is out of the question, the uterus should be sacrificed rather than the ovaries, which occurs as an effect of the radium. In exceptional instances, with small growths menstruation has been preserved, the integrity of the ovaries being maintained, but the risk of their destruction is always present.

The profession has become aroused to the importance of the endocrine problem, as yet not perfectly solved, and there is universal appreciation of the value of the internal secretions. It is, therefore, not probable that the jealous care, which has come to be exercised in preservation of the ovaries, will not be relinquished, as must be done if this new treatment of fibroids is adopted. A properly performed hystercetomy will preserve the ovarian circulation, and thereby insure the continued influence of this very essential secretion.

The character and extent of the complications of uterine fibroids enumerated under group three must impress every physician with the extreme difficulty of an exact diagnosis. In the presence of a hemorrhagic symptom, it is not possible to positively exclude carcinoma. Aside from hemorrhage, the other symptom which brings the patient to the physician, is pain; and this symptom should always arouse suspicion of changes, either in the tumor itself, or of complicating tubo-ovarian diseases. With either of these symptoms present, hemorrhage or pain, it is not possible for anyone to make a positive diagnosis of a simple uncomplicated fibroid. There must exist some doubt in the mind, and if so, it is not a case for radium but for surgery. Comparatively few patients present themselves to the physician with a fibroid tumor of the uterus if these symptoms are absent. And if perchance a fibroid growth is discovered presenting no hemorrhagic or pain symptom, it is a question if any treatment is immediately demanded.

Remembering that roentgen rays and radium treatment are not without possible complications in the form of skin burns, vesico-vaginal and recto-vaginal fistulae, mindful of the difficulties of determining whether a growth is benign or malignant, knowing that young women under the menopause age will probably, under the radium treatment, suffer destruction of the ovarian function with its attendant evil physical and phychological effects, appreciating that one-third to one-half of all fibroid conditions have co-existing

complications, uncertain as yet that there may not be remote harmful effects from radiation upon adjacent tissues, especially the mucous membrane of the bladder and of the small intestines, which lie in intimate relationship to the uterus, impressed as all have been in listening to the arguments of the cancer-control propagandists and to their plausible reasoning that all abnormal growths of every character should be excised, and appreciating that the fibroid, though shriveled by radiation has still within it the possibility of malignant degeneration, and having before us the facts from many tables of statistics that the operative mortality in uterine fibroids is less than 2%, it would seem that the only rational conclusion to reach is that the treatment by operation, with its promise of prompt and complete cure has the weight of argument in its favor, as against every form of palliative treatment.

The radiation treatment is indicated only where surgery is contra indicated on account of the added risks from further loss of blood, danger from anasthesia and shock in the presence of exhaustion already extreme. It is indicated in cases with anemia already well advanced and with resultant cardiac weakness. It is indicated in patients with cardiac or pulmonary disease, and in those with nephritis, diabetes, toxic goitre and other serious constitutional affections. In the treatment of uterine fibroids radium should be numbered among the "last resort" remedies—reserved for the cases unfit for surgery.

CHOLECYSTECTOMY INCREASINGLY OFTEN THE OPERATION OF CHOICE IN DEALING WITH GALL-BLADDER DISEASE

Read before Fifty-fourth Annual Session of West Virginia Medical Association, Charleston, May, 1921, by Wade H. St. Clair, M. D. F. A. C. S., Bluefield, W. Va.

In the early days, when surgery possessed less the claims of an exact science, cholecystostomy stood almost alone as the measure of dealing with gallbladder disease. An operation comparatively simple, it made natural appeal when surgical technic, not so well perfected, entailed considerably more risk when removal of the gallbladder was attempted. The insistence upon vital function probably had something to do with what was considered conservative surgery. Results were not uniformly good, frequently stones reformed and oftener symptoms recurred or did not disappear, and removal was oftener practiced. The transition from one procedure to another was slow but certain. Cholecystostomy is by no means a discarded operation and must serve still the excellent purpose of an emergency measure. As a routine measure, the operation was not altogether disappointing, but as the gallbladder was more frequently removed and the opportunity came to study end-results in sufficiently large series of cases, the fact became abundantly evident that a much larger percentage of clinical cures followed cholecystectomy.

Any consideration of this evolution in gallbladder surgery must take into

account certain anatomical features and physiological function of the biliary tract and must deal with advances in bacteriology and pathology formerly not so well understood. A more complete knowledge of the process of infection in particular goes far in explaining a complete reversal of procedure.

The bile excretory apparatus consists essentially of the hepatic and common ducts which together serve the vital purpose of conveying into the duodenum the bile secreted by the liver. At the junction of the hepatic with the common the cystic duct branches off at an acute angle from the former and joins the gallbladder which is attached in a fissure on the under surface of the liver. The common duct enters the wall of the duodenum between the muscularis and muscosa and joins the pancreatic duct just before it opens into the intestine behind a fold of overhanging mucous membrane. In 62% of people the duct passes through the head of the pancreas, an anatomical point of importance in explaining the obstruction to the flow of bile where the head of the pancreas is the seat of primary or secondary disease. The walls of the gallbladder and the ducts are supplied with a muscle coat, and the gallbladder, an expansible organ, is assumed to have a pumping function and capable of expelling by this function the bile into the lumen of the intestine. When the gallbladder has been removed or has been destroyed by disease, the function of bile output is still maintained, even though certain anatomical changes occur. At the extreme end of the common duct is the sphincter of Oddi, its action controlled by uncertain mechanism but having much to do with intraduct tension and the escape of bile into the intestines. A real function of the gallbladder is still the subject of much speculation. Certain changes in the consistency of the bile occur after the bile enters the gallbladder, notably an admixture of mucus and a change in specific gravity due to the absorption of water. Whether the added mucous lessens chemical irritation in the pancreas when bile is forced into the pancreatic duct is still problematical. The physiologists teach that the secretion of bile is continuous, but that its discharge into the duodenum is not constant and coincides with the period of digestion. The tone of the sphincter of Oddi is considerable and is probably responsible for this periodic output of bile. The lack of tone of this sphincter in species without a gallbladder would suggest that some related function existed between this structure and the gallbladder itself. The contention that the gallbladder is an actual reservoir for bile is no longer tenable, since it is known that from 30 to 50 ounces of bile pass into the intestines in a single day, when the capacity of the organ is only a few ounces at best. The gallbladder on the other hand, capable of expanding to many times its normal size, accommodates to some extent the difference in the rate of bile secretion and bile discharge, and by its rhythmic contractions, comparable to the bulb of an atomizer, has something to do with evercoming intra-duct pressure and regulating the discharge bile from the common duct.

A study of certain anatomical changes and compensatory function following removal of the gallbladder

adds definite knowledge to the considerations of surgical procedure in this region. It is an evident fact, worked out by observation in any clinic and by repeated animal experiments, that dilatation of the extra-hepatic ducts invariably follows where cholecystectomy has been done. This dilatation is usually pronounced and includes the hepatic and common ducts and sometimes even the stump of the cystic duct. The change does not follow the branching heptic duct into the liver substance and dilation of the common duct stops where it enters the wall of the duodenum. This alteration in the size of the ducts is followed eventually by a loss of tone in the sphincter of Oddi, when the bile is poured into the intestine more or less continuously rather than at periodical intervals. A condition then obtains, anatomically and functionally, similar to that in species which have no gallbladder. These facts not only demonstrate that the gallbladder has a function, even if not a vital one, but the application of the knowledge of the changes taking place explains certain phenomina in disease. Immediately following cholecystectomy the intra-duct pressure is necessarily positive and probably increased, and the bile has no chance of a changed consistency by reason of added mucus from the gallbladder. The sudden pain in the region of the back and the quickening of pulse sometimes following removal of the gallbladder may be therefore explained by irritating bile escaping under pressure into the pancreatic duct and setting up an acute pancreatitis. The subsidence and apparent cure of pancreatitis which later follows the removal of the gallbladder may likewise depend upon intra-duct pressure which no longer obtains by reason of duct dilatation and loss of tone in the sphincter. In this connection, the operation of cholecystostomy, relieving intra-duct pressure by constant drainage, would seem a well selected procedure, but once the fistula has closed, no permanent relief has been effected unless the gallbladder has become functionless and the same changes have come about which follow its removal. A gallbladder, probably still infected, would remain a potential source of further trouble.

These observations upon normal gallbladder function and the changes which come about by its removal are significant mainly in establishing the fact that the gallbladder is at least of no vital importance and that the mechanism of bile secretion and bile discharge is performed in a satisfactory way after its removal. This knowledge is primarily important if the present trend of gallbladder surgery is to continue to be justified. Not taking into consideration surgery of the ducts, including removal of stones and duct reconstruction rarely, gallbladder disease has called for cholecystostomy and cholecystectomy both. In no field of surgical endeavor has there been such a striking reversal of procedure. In the first three years of available statistics at the Mayo Clinic (1907-1909) the ratio of drainage operations to removal was more than 3 to 1, whereas a review of a later three years (1913-1915) shows the operations done in a ratio of 1 to 4. More recent statistics would show no doubt a still greater trend to cholecystectomy as the operation of choice.

As the lodgment and growth of bacteria in the body are better understood, and as certain protein reactions to infection are appreciated, the pathology of disease becomes more apparent and significant. Applied to the biliary tract, this is especially true. The gallbladder is vulnerable to infection, the ducts resistant. The origin of infection has led to many theories. It was formerly supposed that the bacteria from the intestinal tract ascended the common duct and entered the gallbladder from below. It was supposed again that the portal circulation bore living bacteria through the liver substance and that the bile in turn carried infection from the liver side. Both theories imply localization of bacteria in the mucous lining and the production of disease this way. Such a situation is conceivable, and a small percentage of infections may thus occur, but the mucous lining of the biliary tract is for surface protection and should be as resistent as the mucous lining of the intestine of which it is more or less a continuation. The disease process commonly found at operation has implied something more than a surface infection from the inside. Typhoid fever for a long time has been known to cause cholecystitis, the infection certainly taking place from the high degree of bacteremia accompanying this disease. The excellent work of Rosenow has shown really that all gallbladder infections may be hematogenous and that bacteria through the vascular stream gain access to the capillary circulation of the gallbladder wall, infection occurring in deeper structures and setting up disease there. Cultures could rarely be grown from the bile, but regularly from the depths of the tissues. Emulsions made from the walls of gallbladders the seat of acute and chronic cholecystitis and injected into the veins of aimals reproduced the disease in the animals injected in 79% of cases, thereby not only demonstrating further that infection is through the blood stream, but showing also a selective affinity of bacteria for similar tissues. The same organism which caused cholecystitis by systematic injection failed to produce the disease when injected into the portal circulation or injected directly into the gallbladder. These observations make good the contention that infection, probably nearly always hematogenous, is the prime factor and that the infection originates in and, regardless of secondary developments, persists in the deeper structures of the gallbladder wall. The point that arises if there could be a certainty in any case that the disease is eradicated by drainage alone.

The nature of the infection, its continuous, and the reacting organism cause varying changes in and about the gallbladder. The infection may be primarily severe, causing local peritonitis, and adhesions later of the gallbladder wall may take place following the initial infection. Other grave conditions are encountered when disease has been present for a short time or a considerable length of time. It is obvious that the precarious condition of the patient under such circumstances would call for the least possible amount of operating, and cholecystostomy would then serve a good purpose. Certain of these cases require removal of the gallbladder as a later procedure. Stone production occurs in 75% of

gallbladder conditions and represents solid evidence of disease. Infection is the main factor, furnishing a focus about which the bile salts accumulate, but infection need not be necessarily severe. The principal constituent of gall-stones is cholesterol, and in as much as 80% of all cases of gall-stones occur in women and that a like percentage of these women have borne children, the contention receives added weight that a high degree of cholesteremia furnishes another factor in stone production. Frequently gallbladders, containing a few or many stones, show no thickening or other palpable evidence of disease, and colic the result of mechanical irritation may have been the principal symptom in bringing many such cases to operation. Under these circumstances removal of the stones and drainage would seem adequate measures if we did not know that infection frequently persists, although it is not palpably evident in the gallbladder wall at operation. It is always the potential infection that is to be considered, which may recur or persist and cause future trouble, whereas removal of the gallbladder would do away with its source. The frank attacks of colic would be relieved usually in any instance, even not allowing for a persisting source of stone formation when drainage alone was done, but reflex gastric symptoms might still keep up where a retained gallbladder continued to harbor an old infection. The adhesions so pronounced after cholecystostomy may not be due so much to faulty technic of fixing the gallbladder to the abdominal wall as to the persistence of infection by reason of an operation which does not remove its source. The fact must not be overlooked finally that the infected wall of a retained gallbladder, even barring manifest biliary disorder, might act as a focus, like the tonsil, for distant infections throughout the body. Certain myocardial and other vascular changes are not infrequent notations in patients who have harbored for years gallbladder disease. Cholecystitis without stones calls essentially for no different plan of procedure, except that the mechanical feature of a foreign body is not a consideration and that infection is more emphatically emphasized as the factor to be dealt with. The so-called strawberry gallbladder is not accompanied by stone production, but furnishes probably as solid an evidence of disease as if stones were abundantly present. An infection finally manifesting itself clearly by clinical symptoms may be evident change in the gallbladder wall or by palpable nodes along the cystic and common ducts. Assuming that adequate exploration has ruled out any other abdominal lesion and then applying cholecystectomy or any other procedure to the relief of clinical symptoms which are not corroborated by pathological findings becomes largely speculative surgery.

The merits of any operation must be judged largely by results obtained. We have not reached a point in any phase of surgery where results are satisfactory in all cases, and certainly when dealing with a complicated mechanism like the biliary tract, a certain number of cures will not follow, whatever measures are adopted. A recurrence or a persistence of infection which has included the ducts, reformed or everlooked calculi in

these structures, adhesions and chronic pancreatitis are conditions which cannot be foreseen and which cannot be obviated entirely by any operation. A relative advantage, however, of one surgical procedure over another may be evident enough when viewed in the light of results obtained in a series of cases sufficiently large. Applied to diseases of the gallbladder, there can be little doubt on the score of results that cholecystectomy is now easily the operation of choice. Of 243 cases to whom letters of inquiry were sent and from whom answers were received in patients on whom cholecystostomy was done at the Mayo Clinic, 53% of these patients were cured, 38% improved, and 9% were unimproved. The same investigation of results in a slightly smaller number of cases (219) on whom cholecystectomy was done showed that 71% were cured, 22% improved, and 7% not benefitted. In one series, Deaver reports 4% of operations as secondary to previous cholecystostomies, and states that the most common cause of recurring trouble after drainage was stones in the gallbladder and next in frequency adhesions and stones in the common duct. In 2027 operations at the Mayo Clinic, covering a period of two years, 219 were in patients who had been operated on previously. 120, or 55% of these had had drainage done. 59 of these cases had stones in the gallbladder and 9 in the gallbladder and ducts at the secondary operation. These statictics not only show a percentage of clinical cures greatly in favor of cholecystectomy, but demonstrate also a persistence of infection and a decided tendency to stone production where the gallbladder has been left.

In summarizing, we conclude that the gallbladder has a function that seems to be definite but not vital. When removed by operation or destroyed by disease, certain compensatory changes take place in the ducts, and the mechanism of bile discharge is accomplished in a way that does not disturb the patient's health, the altered mechanism being similar to that of species having no gallbladder. Infection is the dominant factor in the production of a gallbladder disease. It is not proven that bacteria do not gain entrance through a frontal attack, but evidence would indicate that infection is usually through the vascular stream. The contention is well borne out by bacteriological study and animal experiments that infection is deep seated in the gallbladder wall. It follows therefore that a retained diseased gallbladder remains a potential source of future trouble and is a decided factor in stone production and the recurrence or persistence of symptoms. Cholecystostomy serves a purpose as an emergency procedure, but cholecystectomy, on both theoretical grounds and on the score of better clinical results, should be the general operation of choice in dealing with gallbladder diseases.

BLOOD TRANSFUSION

Read before the West Virginia State Medical Association, Fifty-fourth Annual Meeting, Charleston, May, 1921, by L. D. Covert, M. D., Moundsville, W. Va.

By the term "Transfusion of blood" is meant the transmission of blood from the circulation of one living in-

dividual into that of another. Transfusions are done to replace the blood lost by hemorrhage or destroyed by disease; to check any tendency to hemorrhage as a result of a deficiency of any of the blood elements; to increase the resistance of an individual; to supply actively functionating blood cells in cases of poisoning from illuminating gas; or to supply specific antibodies for the treatment of certain contagious or infectious diseases.

HISTORICAL. — References to transfusions can be found in early historical writings. However it was not until after the discovery of the circulation of the blood by Harvey in 1628, that the transfusion of blood was taken up with added interest and carried out on a more scientific and rational basis. In 1652 Francesco Falli described his metod of using two cannulae, one of bone and one of silver, the two being connected by a piece of prepared artery. In England in 1666 successful blood transfusions were performed on animals by Richard Lower. The following year the same man transfused a young man on three different occasions with lamb's blood. The carotid artery of the animal was connected with a vein in the arm of the patient by means of a canula. Priority for human transfusions with human blood, however, belongs to J. B. Dennis of the University of Paris, who, a few months previous to the transfusions report by Lower, successfully performed the operation twice on a patient. Great interest as well as professional jealousy was aroused in Paris, and the Courts finally issued a decree prohibiting human transfusions in France. In Italy, Germany and Holland the operation was soon taken up by various investigators. The technical difficulties of transfusion as carried out at that time, and the inability to obtain suitable human donors were great drawbacks to the extension of transfusion. In Germany, transfusions with defibrinated blood became popular about 1863; Pannum and Landois showed that the operation was simple and could be successfully performed in animals and man.

The danger of intravascular clotting associated with the use of defibrinated blood and the difficulties inherent in the direct transfusion led Von Bergman and others to condemn the operation and recommend in its place the intravenous injection of physiological salt solution. Blood transfusion in Germany was not entirely given up, and we find Von Ziemssen performing in 1894 indirect blood transfusions by means of syringes.

The modern practice of blood transfusion may be said to have had its origin in 1897, when Murphy showed the practical application of blood vessel suture in transfusion. About this time French operators showed the flow of blood could be kept up indefinitely if the vessels were approximated so that the uninjured intimas came into close contact. In 1902, Carrel published his technique of blood vessel suture, which made the direct transfusion of blood a more certain procedure. In 1906, George W. Crile reported his method of transfusion by special cannulae. While the idea of using a canula as a support of a vessel anastomosis was not new with Crile, yet he perfected the canula and devised an especially convenient handle for it.

The transfusion of blood thru cannulae, bringing into contact intima to intima, was a marked advance in the technique of transfusion. The difficulties of and objections to an extensive wound on donor and recipient, the obliteration of important blood vessels, and the frequent failures, stimulated further investigation, and development of more simplified and certain method of indirect transfusion. The syringe method of Lindeman, the paraffin tubes of Kimpton and Brown, and the apparatus of Unger represent distinct improvements. Finally, the use of anticoagulants has come to the fore, and the citrate method of blood transfusion seems so far to represent to many the ideal method in simplicity of technique, ease of procedure and certainty of result. In 1914, Hustin advised the use of O. 2% sodium citrate in blood transfusion, with an addition of a small amount of glucose and an equal volume of salt solution. He performed a successful human transfusion by this method. A year later, R. Weil stated that he had used O. 1% sodium citrate in several successful transfusions, (and R. Lewissohn about the same time found what had already been shown by Hustin, that O. 2% sodium citrate would prevent coagulation and was, therefore, suitable for purposes of transfusion).

METHODS OF TRANSFUSION.—The modern methods of blood transfusion may be divided into:

I. Direct—(a) Mediate; (b) Immediate.

II. Indirect—(a) Without the use of anticoagulants; (b) With use of anticoagulants.

I. In the DIRECT MEDIATE method, a cannula is interpolated between the vessel of the donor and that of the recipient. The glass tube coated with paraffin recommended by Brewer is an example. In all these methods, the blood has a tendency to clot after a while in the canula and thus interrupt the progress of the transfusion.

In the DIRECT IMMEDIATE method of transfusion the vessels themselves of donor and recipient are brot together, so that intima is in contact with intima. The suture method of Carrel may be mentioned as one of the first Immediate direct methods. The cannula of Crile also belongs to this group. The blood does not flow thru the cannula but the latter is used to facilitate the anastomisis of the two vessels. The great disadvantages inherent in part or in whole to almost all of the direct methods of blood transfusions are the following: 1. The necessity of a large incision over the artery or the vein of the donor and the vein of the recipient. 2. The destruction of an important artery of the donor in an artery to vein anastomosis. 3. The inability to determine the amount of blood transfused. 4. The great technical difficulties connected with cannula and suture operations. 5. The frequent failures.

The DIRECT methods of blood transfusion have no advantage over the INDIECT methods.

II. In the INDIRECT methods of blood transfusion the blood of the donor is collected in a paraffin glass cylinder or aspirated into syringes, and then reinjected into the circulation of the recipient. These methods can also be subdivided into main types: (a) The blood is collected without the addition of a chemical

anti-coagulant, the success of the operation depending upon the skill and the rapidity of the operator. This is especially true of the syringe method of transfusion. In some of the methods, where a large container is used to collect the blood, the clotting is temporarily prevented by a thin coating of paraffin or a thin layer of albolene. Here belong the tubes of Kimpton and Brown. The apparatus of Unger, more recently devised, is much simpler, does not involve an incision over the vessels, and has fewer technical objections.

(b) The blood is mixed with a chemical anticoagulant as fast as it is obtained from the donor. To this group belong substances like hirudin or leech extract, which acts like antithrombin and prevents clotting. On account of the toxicity of the commercial preparations and the inability to sterilize the solutions of hirudin, this substance has been generally discarded. The other anticoagulants that have been recommended are inorganic salts, like sodium phosphate and sodium citrate. These inactivate the calcium of the blood by the formation of an insoluable calcium compound, presence of a small amount of calcium in solution being essential to the process of coagulation. The method, by its simplicity of technique, ease of application, and avoidance of complicated apparatus has become preferable to all others and bids fair to displace them within a very short time.

The syringe method of Lindeman, the stop cock apparatus devised by Unger and the citrate method of transfusion will be described in detail.

The syringe method of blood transfusion was originally devised more than twenty years ago by V. Ziemssen, but it is to the credit of Lindeman to have simplified the technique, and adapted it to the transfusion of large quantities of blood. The method requires expert assistance, two sets of special telescoping cannulae, and a number of 20 or 50 cc syringes. Considerable skill is required and the method has often failed in the hands of experienced surgeons. After the tourniquet is applied to the arm, the cannula, held almost parallel to the vein, is forced thru the skin into the vein. The innermost cannula, which is the longest and has a bevel point at the end, is partly withdrawn as the second cannula is forced in and finally the third or outer one is pushed in while the second cannula is partly withdrawn. The outer cannula is rounded off at the end to avoid injuring the intima during the manipulations necessary in attaching and detaching the syringes. After entirely withdrawing the inner two cannulas a syringe with saline is attached and a slow flow of saline is maintained to prevent the coagulation of blood in the cannula. A similar cannula is next inserted into the donor's vein, and by means of a 20-50 cc syringe which is kept within easy reach, the blood is withdrawn as rapidly as possible. When the syringe is full an assistant detaches it and passes it to the operator of the recipients cannula who removes the saline syringe, attaches the syringe containing blood and empties it gently but speedily into the vein. One syringeful of blood is followed by another in rapid succession until the desired quantity of blood has been transfused. A little saline solution is injected thru the cannula of the recipient after each

syringeful of blood. This keeps the cannula free of blood and lessens the possibility of clotting.

One advantage in the Lindeman method lies in the fact that no incision is necessary to expose the vessels of either donor or recipient. This cannot be said of the methods suggested by Kimpton and Brown. All these methods are excelled in technical simplicity by the more recently devised method of Unger. This instrument consists essentially of a stop cock arrangement, which alternately connects the syringe for blood to the donor, and at the same time a syringe of saline to the recipient; then by turning the cock, the syringe with blood is immediately connected to the recipient and the syringe with saline to the donor. One assistant is needed who slowly forces saline out of his syringe, while the operator aspirates and injects the blood, changes the syringe when necessary, and turns the cock back and forth. A nurse cleanses the syringes as fast as they are used, and places a clean one within easy reach of the operator. Recently at Elsberg's suggestion. Unger modified the technique by the use of a spray of ether from an ordinary atomizer to the barrel of the syringe. The evaporation of the ether cools the syringe and thus delays the coagulation time of the thin layer of blood in contact with its walls. This permits the syringe to be filled and emptied many times and thus avoids the necessity of using more than one syringe for the transfusion. The rapidity with which the syringe is filled and emptied prevents to any great extent chilling of the blood.

The sodium citrate method.—This method is very simple, and requires no other apparatus than a syringe, a large gauge needle No. 11, a sterile 10% solution of sodium citrate and a salvarsan outfit with needle for reinjecting the blood into the recipient. A O. 2% solution of sodium citrate has been found sufficient to prevent the coagulation of blood.

The citrate method has the following advantages: 1. Sodium citrate in the strength recommended is nontoxic and perfectly safe. 2. The stock solution of sodium citrate can be sterilized by boiling without destroying the efficiency of the salt. 3. No special apparatus is required. 4. The blood can be collected in one place, kept and carried some distance before transfusing. 5. A fairly uniform degree of success with this method is the usual experience. It is, therefore, especially applicable in emergencies. 6. After the citrate transfusion, the coagulation time of the recipient's blood is not perceptibly lowered. This method of transfusion can, therefore, also be utilized in conditions associated with hemorrhagic tendencies.

The citrate method of transfusion can be divided into two stages:

In the first stage, the blood is drawn from the donor's vein by means of a large caliber needle (No. 11 gauge into a glass cylinder containing the citrate solution. This is a 10% solution of sodium citrate; to each cc of the citrate solution 30 cc of blood is added. This makes the final dilution of the sodium citrate O. 33%. As the blood is flowing into the glass cylinder, it is generally stirred with a sterile glass rod, so as to mix it with the citrate. Where the donor's vein is small, a 30 cc

Record syringe and a No. 17 gauge needle is used in aspirating the blood. One syringeful of blood after another is rapidly withdrawn, and added to the citrate solution; (it will be found preferable in such instances to have 2 cc of the citrate solution in several 100 cc bottles, to each of which 60 cc of blood is added, and the mixture then gently shaken. The advantage is that the blood is obtained and citrated in small quantities, so that if there is any difficulty with clotting, only a small amount of blood would have to be discarded.) As an additional precaution the blood is next passed thru several layers of sterile gauze. This will make certain that no blood clots are present which would later obstruct the needle during the transfusion.

The second stage consists of reinjecting the blood. In an extreme emergency an ordinary funnel, a piece of rubber tubing and a needle will often answer the purpose. Generally, an apparatus similar to salvarsan outfit will be found convenient.

INDICATIONS FOR TRANSFUSION.*—The indications for transfusion are: 1. hemorrhage; 2. disease of the blood; 3, toxemias; 4, infections; 5, shock; 6, general debility.

1. HEMORRHAGE.—This is one of the conditions in which blood transfusion is the ideal form of treatment. It serves not only to replace loss of blood but also to check actual bleeding. In acute hemorrhages, the results are naturally more brilliant than in less fulminating bleeding.

2. DISEASES OF THE BLOOD.—In secondary anemia the results are satisfactory, providing the primary cause is removed. In pernicious anemia, transfusion yields results superior to any other mode of therapy. Frequently it acts as a life saving measure by initiating the onset of a remission. There is no evidence however that the disease can be permanently cured in this way. Nevertheless, by repeated transfusions, remissions can be effected and the lives of some patients made useful for years. In such cases if possible, the same donor should be successively employed. The amount of blood does not seem to be the determining cause of remission. Small amounts have often been of as much value as large amounts. When transfusion is successful the increase in strength and appetite is very striking. It will relieve the anemia and the symptoms secondary to it—dyspnoea. palpitation, mental symptoms, etc. If transfusion is repeated because the first one failed to bring about a remission, a different donor should be employed, and this procedure should be continued, if possible, until the desired effect is obtained. In such cases, re-transfusion should be resorted to before all of the ground that has been gained is lost. In certain cases, however, even this procedure is of no avail.

3. HEMOPHILIA—Is not cured by transfusions; but for the bleeding of hemophilia, it is practically a specific. It will succeed when all other methods fail. (Valuable time should therefore not be lost in attempts to control bleeding by other methods, since we have at our command a specific that will not only control the hemorrhage but also replace the lost blood).

In bleeding of the new-born, transfusion is a specific. (An almost exsanguinated infant, too weak to cry

and in a dying state, is transformed immediately into an apparently healthy, rosy and crying baby.) As in hemophilia it will save the lives of those who are not helped by subcutaneous injections of serum or blood. Temporizing by using less effective measures may cost the baby's life. Just as soon as the diagnosis of bleeding from the stomach or the bowel of the new-born is made, transfusion should be performed.

3. TOXEMIA—Transfusions have long been used in a limited number of types of toxemia. It is in this group that the indications ought to be enlarged, especially in the toxemia of pregnancy and in toxemias associated with the acute infections, such as pneumonia and typhoid fever.

4. INFECTIONS—In localized pyogenic infections, transfusion will increase the patient's vitality and aid in overcoming the infection.

In bacterimia when the source of the organisms can be found and eliminated, the results are excellent as in cases of sinus thrombosis following mastoiditis in which the jugular vein has been ligated. In post partum sepsis only about one in twenty will recover.

5. SHOCK—Transfusion is at times valuable in shock, and the sooner it is used the more likely it is to be successful.

6. GENERAL DEBILITY—Transfusion should be used primarily to operations as a supporting measure and thus lessen the post operative mortality.

THE DANGERS OF BLOOD TRANSFUSION—The dangers from blood transfusion can be easily avoided and the operation made perfectly safe, by avoiding the following: (a) the use of incompatible blood; (b) excessively large transfusions; (c) emboli of air or blood clot.

I. INCOMPATIBILITY OF THE DONOR'S BLOOD—Iso-agglutinins and iso-hemolysins are present in human blood. These substances will cause agglutination and hemolysis of the red blood cells when incompatible bloods are mixed in the test tube. Human beings can be divided into four groups, depending upon the agglutinins in the serum and the capacity of the cells to be agglutinated. The donor and the recipient should be in the same group, with the exceptions that will be noted.

Group 1, may receive blood from any donor; the serum of this group will neither hemolyze nor agglutinate the red cells of any group. The cells of group 1, on the other hand are agglutinated and hemolyzed by all other serums except that of its own group. A patient in group 1 is known as an universal recipient. Group 4, in contrast to group 1, has its cells agglutinated and hemolyzed by no group, but its serum will agglutinate and hemolyze the cells of all other groups. Group 4 is the largest group. It is known as the universal donor group, since the blood from this group can be transfused with safety into any patient.

In order to group unknown bloods —serum is kept on hand of group 2 and 3 and each of these is tested with the cells of the unknown blood, which has been diluted with normal saline. Then a platinum loop of each is mixed and suspended as a hanging drop and observed for agglutination. If both are agglutinated the unknown blood is group 1. If neither is agglutinated it is group 4; and if but one specimen

is agglutinated it is of the other group.

The percentages of the different groups are about as follows: Group 1, 10%; group 2, 40%; group 3, 7%; and group 4, 43%.

2. The second danger lies in transfusing an EXCESSIVE AMOUNT OF BLOOD. Overtransfusion from the donor's standpoint is evidenced by an increase of the pulse and respiratory rates, repeated yawning or deep sighing. If these symptoms appear the transfusion should be discontinued. Pallor and sweating are occasionally followed by collapse. From these symptoms he will quickly recover if the transfusion is discontinued.

As regards the patient, overtransfusion is more serious. This may lead him to complain of precordial distress, headache, backache or pain in the legs. A more important sign, however, is a short sharp cough. If the transfusion is continued the cough will be repeated. One should not transfuse more than 200 cc after the first cough. Otherwise one may get dilitation of the heart and edema of the lungs.

DOSAGE then is important. For infants the usual dose should be from 80 to 150 cc. For adults, from 800 to 1000 cc. The amounts must of course be varied to meet individual conditions. In sudden acute hemorrhages a much larger quantity of blood is indicated than in primary anaemias and in hemorrhagic diseases. In illuminating gas poisoning a phlebotomy and a large transfusion is indicated.

3. The DANGER FROM EMBOLI should be avoided by proper technique. In using citrated blood it is advisable to pass the blood thru several layers of sterilized gauze before the transfusion.

ELECTION OF SITE FOR INJECTION—The site of election for the transfusion varies with the age of the patient, as well as may the method of transfusion.

The median basilic vein of the donor is always used as being the most accessible and still of good size. Then if the patient is an adult or above the age of ten, a cannula is inserted into the recipient's vein in exactly the same manner as in the donor, except that the cannula is pointed in the opposite direction, namely, in the direction of the flow of blood in the vein.

If the patient is of an age between the time of closing of the fontanels and ten years the cannula in the recipient is placed in the external jugular vein after it has been exposed.

Now the simplest method of transfusing a child when the fontanels are still open is thru the superior longitudinal sinus. The landmark to insert the needle is the posterior portion of the anterior fontanel where the two parietal bones meet in the midline. A needle designated for this work is inserted obliquely and is prevented from going thru the superior longitudinal sinus by a small fixed metal knob, situated 1/8 inch from this point. If the needle is in the superior longitudinal sinus you will get a free run of blood with a fair amount of force. If there is simply a small amount of oozing of blood the needle is not in the sinus.

It is believed that in the young infant the chemical changes which produce non compatibility, such as agglutination and hemolysis are not present, and for this reason one may

use the very practical policy of always using the mother as the donor.

SECRETARY'S NOTE

Discussed by Drs. Godbey, Wise, Ireland, Arkin, Hodges, Baer, Dye, McDonald, Irons and Holland. A good paper favorably commented upon by all who discussed it. The discussions were very interesting. One interesting feature brought out was the transfusion of whole blood just beneath the skin into a new-born babe, the donor being the father or mother. Good results were obtained by this method and many cases were reported.

TWO ABDOMINAL PREGNANCIES IN THE SAME PATIENT FOLLOWING SUPRAVAGINAL HYSTERECTOMY.

Read at Annual Meeting West Virginia Medical Association, Charleston W. Va., May, 1921, by Dr. W. A. McMillan and Dr. R. H. Dunn, Charleston, W. Va.

The patient:—A young woman 18 years old.

F. H.:—Parents living and healthy. One sister and one brother, both well. Patient had ordinary diseases of childhood. Began to menstruate at the age of 13 years; always regular; enjoying good health; made good grades in school and started earning her own living as a piano player in one of the moving picture show houses at about 15 years of age.

On December 14th, I was called to see her. I diagnosed the pain in her lower pelvis as acute double Pyosalpyx, and advised the application of ice, rest in bed,(douches, etc., and also an operation later.

The patient was admitted to the McMillan Hospital, January 22nd, 1918. Opening the abdomen in the median line revealed both tubes very adherent to the surrounding structure, that after the removal of the adhesions, the body of the uterus presented such an angry appearance, that I determined upon a removal of the tubes, uterus and diseased ovaries. The right ovary, with about 1½ inches of the fibrated end of the tube, being healthy in part was stitched up to the right fold of mucus membrane and brought over to make a smooth surface for the stump of the Cervix.

The hospital records say the patient made a good recovery and left the hospital February 16th, 1918. The patient seldom came under my notice after the operation and soon returned to her work again as a piano player.

On July 1st, 1919 the mother of the girl called me, saying that she was worried about her daughter,—that she "was swelling," etc. I requested that the daughter be brought to my office, and I was at once impressed by the tumor in the abdomen. The girl looked well and felt well, with the exception of "cramping and kicking in the abdomen." Upon palpation, I easily made out the tumor over the left side of the abdomen, and also what I thought to be the foetal heart beat. She told me of having had sexual relations, and was very indignant toward me for telling her when leaving the hospital that following her Hysterectomy that she would never be able to have a child. I sent her home and the following day her mother informed me by telephone that she (the daughter) was cramp-

ing very much. Dr. U. G. McClure answered the call, and upon his return said "that girl is pregnant." I showed him the history.

The patient was admitted to Dr. Dunn's Hospital on July 6, 1919, and upon dignital examination, a large red patulous Os was made out with tumor mass floating high in the abdomen on the left side. She was examined vaginally again under a general anesthetic, and I could not determine anything satisfactorily, even though my index finger went through the opening in the retaining portion of the cervix. The patient's abdomen was cleaned up. I made my incision low over the left side of the abdomen, midway between the old scar and the iliac prominence. Upon opening the peritoneum, the first thing that presented itself was the thin amniotic sac filled with its fluid and unruptured. Directly above this and over toward the left abdominal wall was a thick wall of clotted blood that came from the separating placenta.

I walled off the intestinal coils carefully with warm packs so as to prevent an ilius, clipped open the amniotic sac, picked up the baby, clamped and cut the cord. The baby was dead. A small slipping area of skin on the side of the baby's body led me to believe that the baby had been dead anywhere from 36 to 48 hours. The baby was a girl and weighed 8½ pounds.

The placenta was slowly and carefully separated from the left flank under the spleen, practically incarcerated by the greater omentum. Considerable bleeding followed, but hot packs controlled this in a few minutes while I made a stab drain opening well over to the left wing on the ilium and low down. A strip of rolled rubber drain was carried through this, and another in the lower end of the wound. The packs were removed, and the wound closed in the usual manner. The patient was removed to her room in good condition. She was in charge of a special nurse . Soda Bicarbonate solution was given by rectal drip method. Small doses of morphine for pain during the following thirty-six hours. Gas relieved by rectal tube drains removed in forty-eight hours, and upon my return from my vacation three weeks later, I found that the girl had made a splendid recovery.

Dr. Lee's talk on avoiding coming in contact with the intestines in Cesarean section has been a great help to me in this case, for without the knowledge obtained through his experiences, and also those of Dr. Davis of Philadelphia and Dr. Kinzie of Cincinnati, I would boldly have gone in over the tumor with possibly unsatisfactory results.

I regret not operating sooner. Why I should have put off for a few days, while the patient was suffering from the great cramp-like pains in her abdomen, is explained by the false history of exposure to pregnancy. From this history of coitus, I figured the patient about 7½ months.

Dr. R. H. Dunn assisted me in the operation and Dr. McClure gave the anesthetic. Miss Wills was surgical nurse, and Miss Graves the assistant nurse at the time of the operation.

Case history of the patient referred to in the last clinical notes:

Delivered of an 8½ pound baby July 6, 1919. I left for Canada July 6, 1919. Patient stated that she

menstruated regularly every month from August 1, 1919 to August 20, 1920. Her husband stayed with her through July and August, 1920. He left for New York the latter part of August , 1920.

October 23, 1920, the same patient reports at my office and states that she has not menstruated since August, 1920. The patient stated that she menstruated regularly every month from August 1, 1919 to August 20, 1920. Her periods of scant duration and quantity. That she married in January, 1920 and lived with her husband until August, 1920, when he left for New York. That she is sick at her stomach early in the morning. Has not seen any menstrual disturbance since August 20th. Her appetite is good. She has gained in weight. She believes that she is pregnant. She has no abdominal pains. I examined her digitally and find the cervix soft and mushy, and it feels very much the same as that of a pregnant cervix. I have advised her coming again in the next few weeks. She wants to get a divorce from her husband, and I have advised her to make no such request.

October 29, 1920, the patient called at my office. I confirmed diagnosis of pregnancy. Cervix red and boggy. Sick at stomach in morning. Getting fat.

December 14, 1920, I examined patient through vagina and rectum. Felt mass through rectum and can make out mass through vagina. Patient getting fat. No sickness now, and appetite is good. General health is good. Breasts shows signs of pregnancy. Patient has made frequent visits to hospital, and I have noticed continued increase in signs of pregnancy upon examination made at intervals of about every two weeks.

On February 20, 1920, patient reported to my office with her mother, and upon explaining the question of having her present herself at the Chicago Clinic, I fortunately secured the consent of the patient and her family. She left my office about 2 P. M. of that day and spent a very busy afternoon in the shopping section of our city,—afterward walking to her home up a long steep hill. About 3 A. M. of the following morning, she awakened her mother complaining of a sudden pain in her left side. Her mother called Dr. McClure and she said she did not think it necessary for him to come up. The Doctor made a few suggestions for her relief. He was called again at 5 A. M., and went to see her. He called me about 6:30 A. M. I saw the patient about 7:15 A. M. She was pulseless; very white and tossing in bed. Her knees drawn up. Abdomen distended. She was suffering with pains and asked for ice water. Morphine gr. ¼ with Atrophine gr. 1/150 was given hypodermically. The patient was removed carefully as could be done to our hospital.

Not thinking it was wise to wait any longer, we prepared for immediate operation. The abdomen was cleaned up in the usual way, and a long incision made to the left of the median line and parallel with the previous Ceaserian incision. The tissues were almost void of blood. The patient's condition was extremely bad. Upon opening the abdomen, we secured about two pints of clear blood by having it flow into a sterile basin. This was given back to the

patient intravenously with a 2½% solution of Sodium Citrate.

The foetus in this last instance was not free in the amniotic sac,—was floating unattached in the abdominal cavity, but was about two-thirds enclosed on the right wall by what appeared as normal uterine tissue with the short distal end of the right tube, and about one-half a normal appearing ovary on the right side. At the left side of this mass was the protruding amniotic sac with a bulging mass of bleeding placental tissue that had a strong attachment to the sigmoid flexure of the rectum. From this point the hemorrhage was still going on. I spread this with my fingers, and rupturing the thin amniotic sac, lifted out a baby, which was afterward found to weigh four pounds. I then sutured all bleeding and closed the artificially formed uterus. Hot normal salt solution was added to the abdominal cavity, and the patient closed in the usual manner. The patient did not recover from the extreme loss of blood and died about 10 A. M.

There are cases of this kind on record, how many it is somewhat difficult to determine. In going over the literature on this subject, we fail to find a case of abdominal pregnancy following Hysterectomy recurring in the same patient. Dr. Lee in his letter to me of September 13, 1919, on the subject, says, "There are cases on record, how many I do not know, of pregnancy occurring in a fistula after Hysterectomy." In a discussion of this subject before the Chicago Society of Gynocologists and Obstetricians a case was recalled as having been reported by a physician in Germany in 1910.

It is most interesting to note in this case a repetition of the abdominal pregnancy, with a marked difference in the process of development in each case. We are also impressed with the fact that this patient has an early pelvic infection of probably Neiser Origin. That with a fistula established there, the remaining portion of the cervix, about one-half a questionable ovary, a small portion of the fimbriated end of the Fallopian tube attached, she was capable of growing a healthy full termed foetus weighing 8½ pounds. This point, to my mind, is sufficient to make a strong plea for more conservativeness in Gynecological Surgery.

(1) Time to operate in such cases.

(2) Technique in effort to save life of baby and mother.

(3) Removal of the stump of the cervix following first pregnancy.

ANESTHESIA

Delivered before the Cabell County Medical Society by Ruth McMaster, Chief Anesthetist of Kessler-Hatfield Hospital, Huntington, W. Va.

"To bring a living being to that borderland in which life in many respects so simulates death—should at no times be a fool's occupation."

Nitrous-Oxid and Oxygen.

The evolution of general surgical Anesthesia is steeped in tradition, and it is almost impossible to say at what period of the world's history men began to make attempts to relieve pain. It would be a pretty safe guess, however, to say that it was among some of their earliest efforts, one of the primitive modes of inducing anesthesia was by strangulation, thus producing anoxemia and asphyxia.

Nitrous-Oxid was given to the world in the early forties of the last century.

Nitrous-Oxid and Oxygen in 1868 by Dr. Andrews of Chicago.

Several theories have been advanced as to the way in which Nitrous-Oxide produces anesthesia, and it is not necessary now to take up time recapitulating all the old theories. We are pretty thoroughly convinced by our clinical experiences and laboratory experimentations, as well as by that of other Anesthetists and laboratory men, that we have a more definite knowledge of the way Nitrous-Oxid produces Anesthesia than any other anesthetic.

Nitrous-Oxid outside of the body supports combustion while in the tissues, other than the Central Nervous system, it acts like any other indifferent gas. Animals die when placed in it, seeds will not germinate in it, or plants grow, and the blood of an animal killed by it contains no oxyhemoglobin.

Nitrous-Oxid has a special effect on the central nervous system by reason of the excluding of Oxygen. If it were an indifferent gas, no effects should be obtained with a four to one mixture because ordinary atmospheric pressure is four parts of nitrogen and one part of oxygen.

Blood dissolves more Nitrous-Oxid than water, apparently for the reason that it is taken up by the lipoids of the corpucles in much the same way that chloroform is.

It is introduced by way of the respiratory tract in the lungs, when in the alveoli of these organs it is taken up by the blood, but upon which it has no specific chemical effect, the resultant anesthesia being produced by some alteration of the oxygenating process it is distributed throughout the body, beginning back in the pulmonary veins, causing more or less stagnation, which results in a general anoxemia condition that may quickly developp into asphyxiation, unless much skill is used in the proper mixing of the gases, and a much closer watch kept over the respiration, pulse and the color, of the patient than is necessary when using ether.

The fact that Nitrous-Oxid anesthesia can sometimes be produced without any apparent or easily discovered cyanosis, does not prove the anesthesia is not the result of a diminished or altered supply of oxygen, because in fact it is the increasing or diminishing of the Oxygen which determines the depth of the anesthesia, and profound anesthesia is frequently obtained, especially in the very anemic, or those with a low hemoglobin test, without the slightest apparent sign of cyanosis being present—so that those of limited experience may easiily be mistaken in reading the signs of anesthesia. In other words, N. 2. O. anesthesia is a general anoxemic condition, whether cyanosis is present or not, in which the brain cells partake of the general anoxemia, thus preventing the recording pain secretion, because the brain cells, like the pulmonary veins. only functionate in the presence of oxygen. If we had asphyxia to a lethal degree, there would be a totai cessation of all the processes of life.

In anoxemia we have a partial cessation or anesthesia; and if those Surgeons and Anesthetists who are complaining so loudly of their bad results will maintain anoxemia, instead

of cyanosis and their asphyxia, they will have little reason to condemn one of the greatest advances for the betterment of modern surgery.

Nitrous-Oxid when given to a lethal degree, does not produce death by paralyzing the heart muscle, as has been stated by some Surgeons, but by its paralyzing effect upon respiratory center. Of this we are convinced by laboratory experiments and clinical experience of many thousands of administrations for all sorts of surgical operations. In all of our experiments the same phenomena were present in every case, when surgical anesthesia was produced and maintained, a beautiful rhythmical pulse and respiration was the result, but when oxygen was shut off and N. 20. was used alone, the blood pressure was suddenly increased, the respirations became more rapid and finally death from asphyxia would have been the result.

The proper use of oxygen in connection with Nitrous-Oxid places this phase of anesthesia almost entirely in the control of the operator if he is skillful and attentive.

The administration of gas-oxygen, for general surgery, or for surgery of the oral and pharyngeal cavities, are similar in that a steady, even flow of Nitrous-Oxid, under a constant positive pressure, are absolutely necessary, remembering all the time that Nitrous-Oxid is the sleep producer, and that oxygen is simply the agent that regulates the depth and character of the anesthesia.

No hard and fast rule can be laid down as to the percentages of gas and oxygen to be used, and notwithstanding the claims of the manufacturers, the machine has not yet been made into whose unreasoning power the patient can be trusted while the Anesthetist enjoys the society of those around him.

The patient is the thing to watch, and not the machine. This is one of the reasons, it seems to me, when some have had trouble with this anesthetic. They assume that the apparatus was all that was required, and that knowledge and experience were unnecessary. Enough oxygen should be used to prevent cyanosis, although a degree of cyanosis is not objectionably dangerous; much depends upon the patient as to the amount of cyanosis permissible.

If the patient takes the anesthetic badly, or if a proper degree of relaxation is not possible without too much —cyanosis, then it is far better and safer to introduce some ether along with the gas-oxygen, than to attempt to get relaxation with gas-oxygen alone. The amount of ether used is an indication of two things; first, the skill of the anesthetist in the use of the anesthetic; second, the willingness of the Surgeon to work with some little disadvantage to himself, but more comfort and well being to his patient. No one claims that it makes the Surgeons and Anesthetists easier but do claim that it is many times safer and better for the patient when these two conditions exist.

Superior Value of Nitrous-Oxid.

As for the anesthesia itself, perhaps in no other class is the value of Nitrous-Oxid as compared with ether and chloroform and more clearly demonstrated, the absence of nausea, the easily and quickly attained unconsciousness prevent or minimize the dread of the anesthetic. Moreover with Nitrous-Oxid the degree of un-

consciousness may be gradual to suit the condition of the patient at every stage in the operation. In certain cases it is never pushed beyond the stage of analgesia; in others the patient may be allowed to pass into deeper unconsciousness at certain phases of the operation being quickly brought back to analgesia; in still others it may be safe to maintain a complete unconsciousness throughout,—such as abdominal surgery or any operation where relaxation is necessary.

Induction

The induction of Nitrous-Oxid is so rapid and pleasant that, that feature alone makes it an ideal anesthetic agent. The patient does not experience that long drawn out period of floating in space, of suffocating, and the many numerous things that happen during that period of five to fifteen minutes, as with ether, even though it is administered by an expert anesthetist.

The gas has a peculiar sweetish odor and taste, is non-irritant to the mucous membraness, as Nitrous-Oxid produces anesthesia by its direct Physciologic effect.

Analgesia is obtained in from 1 to 2 minutes, surgical anesthesia 3 to 6 minutes.

Pre-medication, of course, makes the induction of any anesthetic more smooth and less objectionable to the nervous patient, and personally, I think that it is an absolute necessity with alcoholics. Our dosage is Morph.-Sulp. 1/6 to 1/4th. with Atropine 1/150th Hypo. 1/2 to 1 hour before operation or Morph-Sulph 1/4 grs. with Mag-Sulph. 25% Sol 2. C.C.

Re-breathing Regulated

Re-breathing method:

Now for an even anesthetic and as an aid to the advoidance of surgical shock, a certain amount of re-breathing is of benefit; approximately the rate of flow of the gasses should be such that from a quarter to a half of the volume of each respiration is of freshly added gas mixture. Such a proportion reduces to within reasonable limits, the expense of gas-oxygen.

Our observations on the effect of re-breathing, so far as they go, agree clinically, with the laboratory findings and observation of the blood pressure under Nitrous-Oxid oxygen anesthesia in that there is a distinct rise not only at the commencement but also throughout the operation. After the removal of the mask with its accompanying necessity for re-breathing, there is a distinct and rapid fall in the blood pressure, both on very sick and debilitated patients, this fall is sufficient to abolish the radial pulse; recovery is prompt and within one-half hour they are in fine condition and remain so.

A long N. 2 O. anesthesia without re-breathing frequently leaves the patient in a very exhausted condition. With regulated re-breathing, however, this is not the case.

Recently it has been proven that shock never occurs as the result of light anesthesia and that it is impossible to anesthetize a patient so lightly that as a result there may be shock but rather that shock results from deep anesthesia.

Moreover, there is no shock after gas-oxygen anesthesia.

The Post-Operative Condition of patients who have been anesthized with Nitrous-Oxid and oxygen with re-breathing and little ether when

necessary, is to me one of the most striking points of this method.

The patients are conscious within 2 to 3 minutes after the removal of the mask and in the majority of cases are not sick.

There is, in a fair proportion of cases, a feeling of nausea which lasts for ten to fifteen or thirty minutes, and occasionally there is some headache, but beyond that the recovery is perfect.

We must remember that this anesthetic is non-toxic, therefore, there is less strain put on the patient seeing that he does not have to eliminate the drug, be it ether or chloroform from his system.

I wish that you might see for yourself the awakening of the patient in the majority of cases, after removal of mask following an operation lasting two hours. I have asked patients how they felt, and have had them tell me feeling good.

The apparatus that I use is "The Gwathmey," Dr. Gwathmey of New York, as you know, is considered the authority on "Anesthesia" in this country and abroad. The machine is simplicity itself which tends to make the administration of the Nitrous-Oxid most simple and safe. Its two great advantages are the sight feed and re-breathing bag.

The supply of Nitrous-Oxid and oxygen is controlled by means of two graduated taps, which permit the gasses to flow through the glass sight feed in a proportion that can be seen so that one has visual evidence of how much of each gas is being inhaled by the patient.

The gases may go direct to the patient via the re-breathing bag or may be directed through the bottles containing ether.

The great advantage of the sight feed is:

In gas-oxygen more than in ether anesthesie, the anesthetist has to be guided by the patient's color, the patient's blue due to lack of oxygen in the blood, cannot be determined in figures at the operating table. Consequently the amount of Nitrous-Oxid to produce deep anesthesia at the safety margin, with the proper amount of oxygen to prevent cyanosis, cannot be determined or expressed in figures.

All the talk about percentage or proportion of the mixture expressed in liters or gallons per minute is a misleading and futile attempt to reach the goal over a dark ground. When it can only be accomplished empirically and is individually different in each case, you will set your sight feed in accordance with the patient's color.

You will form an intimate relationship between the patient's color and the sight feed. The better you observe the patient, the better the result. Always remember the patient is the thing to watch, not the machine.

The advantage of the re-breathing I have already related to you.

Nitrous-Oxid and oxygen is given as a routine anesthetic at the Kessler-Hatfield and Huntington Hospitals regardless of cost and has been administered for every kind of operation from a tonsillectomy to a Hysterectomy, which covers a large field in general surgery.

We use Nitrous-Oxid-Oxygen alone or with ether or anesthol sequence.

Without the use of local anesthe-

sia, such as Crile advocates except in extreme cases where it is necessary to do abdominal work and the patient can not stand a deep anesthesia, we then anesthetize and carry them in analgesia, with the use of novocain, which makes a very successful combination.

I regret that I do not have the time to tell you about my Oil-Ether-Colonic anesthesia, but, if you are interested, I shall be glad to another time.

I thank you all for your kind attention.

NEPHRITIS

Read Before the B, R. T. County Medical Society, July, 1921. by Ernest R. Logan, M. D., Davis, West Virginia.

A clinical classification and report of cases.

The term Nephritis has only a relative bearing on the micro-anatomic normality or abnormality of the renal structures, as practically every adult kidney is injured to some extent. In one thousand autopsies reported and in literature only three normal adult kidneys were found. It is only when the damage is so extensive that the kidneys can no longer perform their excretory function properly that symptoms arise, and our interest lies in finding the earliest signs of this failure. To accomplish this the urinalysis is of little value as the pathognomonic urinary findings of nephritis develop only at a relatively late period. The two methods to be relied on are the phenolphthalein test and the determination of the nitrogen content of the blood.

The two dominating factors in renal function are: First, renal epithelium and, second, the Cardio-vascular system. Any excessive deviation from normal in either of these will give rise to symptoms of nephritis.

In Acute Nephritis of toxic origin, as following the ingestion of certain poisons as HgC12, phenol, etc., or due the presence of certain toxins in the blood, as following diphtheria, scarlet fever, etc., or in the course of pregnancy, the damage is done to the renal epithelium first and such Cardio-vascular symptoms as develop (rapid pulse, high blood pressure, edema, etc.,) are the results of retained products of metabolism.

In Acute Nephritis of Cardio-vascular origin coming on in cases of acute Cardiac Decompensation or in the course of an organic heart lesion with a daming back of the venous blood in the kidneys the damage to the renal cells is the result of undernourishment.

Chronic Nephritis may follow an acute attack due to destruction of renal cells and substitution of connective tissue or it may come on insiduously due to disturbance of circulation in the kidney in cases of Arteriosclerosis or in organic heart disease.

Current literature, text books, etc., are full of such terms as Acute Parenchymatous and Interstitial Nephritis, Tubular and Glomerular Nephritis, etc., all of which are interesting and exact to the Pathologist when our patient comes to the autopsy, but for us such a classification is not only impossible but, if made, is of no practical value either in the treatment or in aiding us to a clearer understanding of the case, while a classification based upon Etiology and Clinical symptoms would aid in both. Realiz-

ing the need for such a classification I submit the following, the basis of which is laid in the above.

A Nephrosis—An idiopathic degenerative change in renal epithelium Constitutional symptoms slight or absent. Increased blood. urinary findings, large amounts of albumin, no casts, no r, bc.

B Toxic or Inflammatory destruction of Renal epithelium following fevers, sudden changes in temperature, ingestion of poisons; pregnancy.

1 Acute-Constitutional Symptoms: High blood pressure, edema, headache, urinary findings; intense albuminuria, red blood cells, casts Phenolphthalein output decreased; blood nitrogen increased.

2 Chronic — Following acute in which renal epithelium has been replaced by connective tissue; Constitutional symptoms normal B. P., no edema, polyuria; urinary findings; slight albuminuria; no R. B. C.; no casts.

C Cardio-Vascular due to malnutrition of renal cells.

1 Acute: In cardiac decompensation; Constitutional symptoms; those of Cardiac decompensation with headache and backache added; Phenolphthalein decreased; blood N increased; urinary findings; small amount of albumin; many casts, few R. B. C.

2 Chronic: Insidious change in renal epithelium due to slow nutritional changes in arterio-sclerosis. Constitutional symptoms: Polyuria, frepuent headaches, dizziness, etc.; decrease in phenolphthalien elimination; increase in the nitrogen content of blood; urinary findings; slight albuminuria; an occasional cast; no R. B. C.

D Terminal: The end stage of any nephritis. Constitutional symptoms: Suppression of urine; uremic symptoms; uremic convulsions; coma; death; urinary findings; extreme albuminuria; many casts and R. B. C. Phenolphthalein test shows slight or no elimination; blood nitrogen greatly increased.

In regards to the treatment of the chronic cases of course the object is to improve the general condition of the patient, diet, lower B. P., keep the bowels moving freely. As to treatment directed toward correction of the abnormality in the kidney nothing successful has as yet been offered. In the treatment of the acute condition I wish to call your attention to the work of Dr. Fischer carried out in 1916 consisting in the removal of one pint of blood and the substitution of one liter of sterile water containing fourteen grams of sodium chloride and twenty grams sodium carbonate, intra-venously. This in conjunction with diaphoresis by means of the hot pack has in my experience acted almost as a specific. Of course due attention must be paid to elimination thru the bowel and to proper diet for continued improvement, but for immediate results I know of nothing as gratifying as the above.

F. D. Male child; age 13; diphtheria. Developed all the signs and symptoms acute Toxic Nephritis on the fifth day. Removed 250 cc blood and gave 500 cc. Chloride Carbonate solution into the same vein. Edema subsided within 12 hours. Red cells had disappeared from the urine in two days and within a week no trace of albumin was present. No relapse to date.

F. J. An American man of 35

came under my care in Mercy Hospital, Columbus, O., after having taken 15 grains of mercury bichloride with suicidal intent. On the third day the patient showed all signs of a severe Acute Toxic Nephritis despite the most rigorous first aid treatment. At this time I was not using Fischer's treatment but used most of the usual methods with no results. At this time Fischer's treatment was called to my attention and during the first 24 hours after its instigation he passed 40 oz. of urine, in three days edema was gone; B. P. almost normal; albumin, a trace; R. B. C. none; an occasional cast. Six months later the man still had a trace of albumin in his urine but was otherwise fully recovered. Case passed from my care at this time classified as Chronic Toxic Nephritis.

J. S. American man age 56 came to Hosppital in Mullens complaining of dizziness and headache. Physical examination revealed extreme arterio-schlerosis. B. P. sys 190; dias 170. Renal phenolphthalein test showed: First hour, 20%; second hour, 10%, and the third hour 5%. Examination of the blood showed 6% nitrogen in the blood. Wasserman negative. Urine showed a small amount of albumin, and an occasional hyaline cast.

Diagnosis Chronic Cardio-vascular Nephritis.

Patient placed on full doses of Potassium Sulphate daily.

Some improvement while in the Hospital and for the following two months after which I lost track of him.

E. H. Girl of 11 years. Called in consultation during the second week of Scarlet Fever. Patient edematous, subcutaneous hemorrhage over body. Comatose. Urine scanty, smoky sp. gr. 1024; loaded with albumin and casts and red blood cells.

Diagnosis Acute Toxic Nephritis. Patient was in such condition that to remove her to a hospital was inadvisable, so no intra-venous was attempted, but a hypodermaclysis was given. Patient died three hours later.

I submit these case reports not as statistics but to illustrate the apppplication of the clinical classification.

As to the merits of the Fischer's treatment, I wish to submit a series of 43 cases of my own so treated with a mortality of six. Of these, each of the six were practically in extremis before the treatment was given.

PHYSICAL DIAGNOSIS

Read Before the B. R. T. Medical Society at Thomas, W. Va., July, 1921, by C. E. Watson, M. D., Coketon, W. Va.

In order to treat our patients as they should be treated we must first make our diagnosis. The treatment of many cases is easy if the diagnosis is known, but so often we are at a loss for a correct diagnosis. The word "diagnosis" is of Greek derivation from "dia," meaning apart and "gnosis" meaning knowledge, or the art of distinguishing one disease from another. To be a first class diagnostician is truly an art and a coveted art that all physicians should seek. When we think of men who have really attained this art by diligence, patience and hard work, the name of a master of the art of diagnosing comes first to mind, the late Osler. If you have ever studied his

book on medicine or sat in his clinic you realize how well he had mastered the subject. Not many men will ever become Oslers, but we can become better diagnosticians if we will but make good use of our powers of observation.

Physical diagnosis does not receive the consideration in our medical schools today that it should. A few years ago it held a much more important place. The students then were trained more along the lines of pure physical diagnosis and as a result they were made to see, hear and feel what was taking place in the body. They did not have the labratory methods of today to help them in their diagnosis, consequently they became keen observers and had to rely on inspection, palpatation, percussion and auscultation. It is only by experience and practice that one becomes a successful diagnostician.

Are we relying on real physical diagnosis or are we for want of time or some other reason depending on the laboratory for our diagnosis. A correct diagnosis often goes begging, but if it does have we done our best to make a correct diagnosis. If we have, then we need not be ashamed to say we do not know and ask some one else or the labratory to help us out. The laboratory has its place and we all welcome the opprotunity to call on it, but we should make it a secondary consideration. To dig into a puzzling case and spend some time, providing the latter is not a vital factor, in making a correct diagnosis gives one a great deal of satisfaction. While you are making your differential diagnosis you are perhaps uncovering old friends of worth long forgotten and making the acquaintance of new friends that will help in the next trying case.

It is an easy matter to make a diagnosis of Osteopathic or Chriopractic methods for all one needs to do is to say a bone or nerve is misplaced or pinched and your diagnosis is made. After they have made their diagnosis they are so ignorant of the physiology, histology and pathology of the human body that they blindly treat their patients without the slightest inkling as to what is really taking place in the body. For instance I was called one night about twelve o'clock to see a young man suffering with appendicitis. An Osteopath was there and had just finished giving the patient a deep massage of the belly, and as I entered the room he frankly said he had done all he could and thought it was a case for a surgeon. I examined the man and diagnosed a ruptured appendix and advised immediate operation. The Osteopath had certainly done his part well. When we opened the abdomen at the hospital we found a ruptured appendix with pus smeared all over the intestines and about six inches of the intestine near the cecum was hemorrhagic, due to the massage. So much for ignorance of pathology. A medical man would not maltreat his patient in that way, but the point I wish to bring out is that we must know our pathology and ever try to keep a clear picture in our mind of the pathological changes that are taking place. Having made our diagnosis and knowing our pathology we are better prepared to treat our patient intelligently.

Inspection heads the list of the four methods of physical diagnosis. Too often we allow important points and

frequently the key to the diagnosis to escape us simply because we have not observed our patient and his surroundings closely. It is not always necessary to have the patient stripped, but often we miss our diagnosis for that very reason. A diagnosis of appendicitis has been made many times based on pain in the right side and the patient may lead you on and later show you a nice scar from his apppendectomy. Your diagnosis may be staring you in the face but you have forgotten to inspect simply because you are looking for something hidden. For example the clubbed fingers would have given you a clue to some pulmonary trouble had you stopped to inspect them, but you were perhaps lead astray by something else. It seems as if Nature tries to picture as much as possible on the surface for our benefit, yet we let much of it escape our eyes while we are palpating, percussing or ausculating for the hidden trouble. We should train ourselves to see first that part of the picture mirrored on the surface and then as we look deeper with the other methods we will obtain a composite picture of all the pathological changes that are taking place. Lets endeavor to place inspection in the first rank where it rightfully belongs and I am sure we will become more proficient in our diagnosis.

How can we make Physical Diagnosis an interesting and instructive part of our medical meetings? It seems to me that Medical Societies that meet often and have a good membership could profit by having physical diagnosis meetings. New signs and symptoms are constantly being brought forth, but do we hear of all of them, and if we do are they impressed upon us as being worth while? A discussion of the newer methods and signs, their usefulness and how they are carried out could be made a great help to all if presented as though to a class in medical school. Then, too, go over the old methods and keep them ever fresh in our minds, for it is only by repetition and practice that we can hope to master physical diagnosis. When a member goes away for special work let him bring back to the society some of the newer things he has learned and pass them on to others. When possible have clinical cases and pathological material brought to the meetings and discuss them, thereby impressing on each one, the relation between the symptoms, physical findings and the pathological changes.

These few remarks are not intended to tell you something about physical diagnosis that you do not already know, but to try to stimulate us all to spend more time learnig the art of diagnosing. The more proficient we become in diagnosis the better it will be for our patients. If our diagnosing needs rejuvenating lets try to get some new life into it. For after all much of our success as a good family physician depends largely on our ability to correctly diagnose and to give him the relief that he seeks.

Announcements and Communications

INEFFICIENCY DUE LARGELY TO IMPERFECT SIGHT

In a careful examination of ten thousand industrial and commercial workers, active in their work and

supposedly in good condition, fifty-three percent showed defective vision uncorrected. It is an absolute fact that many employees are accused of inefficiency and carelessness when it is entirely a matter of imperfect vision.

The motion picture camera is made in imitation of the eye. The better the condition of the lens and the better the illumination of the subject, the better the result of the photographer's effort. Just so with the more perfect instrument, the eye. It behooves every one to see that his eyes are kept in good condition and free from eye-strain coming from defects which may be corrected by glasses, or the strain due to improper lighting.

SAVE AND PROLONG THE USEFULNESS OF THE EYES

A well known specialist addressing a national conference stated: "For every blind person we generally can count from one to three who are what is termed near-blind, and a still greater number with markedly deficient vision. So we may continue to estimate until we come to what seems an almost universal lack of eye perfection.

"We shall better understand by the number of young men between the ages of twenty-one and thirty-one years who were refused entrance to the army because of deficient vision; deficient that the glasses failed to bring it up even sufficiently for one draftee to be acceptable for limited service.

"Just as it is necessary for school children to be examined, so every individual between the ages of twenty-one and thirty-nine years should have the ocular state ascertained, as was done in the case of the army draftees.

"Early tendency toward the development of cataract may also occur during this period. Refractive errors (defective vision) when corrected lessen this tendency. Correction of defective eyesight, therefore, is a stitch in time, for it will save and prolong the usefulness of the eye."

PRINCIPAL CAUSES OF DEATH.

Census Bureau's Summary of Mortality Statistics, 1920.

Washington, D. C., Oct. 22, 1921.—The Department of Commerce announces that the Census Bureau's annual report on mortality statistics, which will be issued shortly, shows 1,142,578 deaths as having occurred in 1920 within the death registration area of continental United States, representing a death rate of 13.1 per 1,000 population as compared with 12.9 in 1919, which was the lowest rate recorded in any year since the registration area was established in 1900.

The death registration area (exclusive of the territory of Hawaii) in 1920 comprised 34 states, the District of Columbia and 16 registration cities in non-registration states, with a total estimated population of the United States. The state of Nebraska was added to the registration area in 1920, so that at present the only states not in the area are Alabama, Arizona, Arkansas, Georgia, Idaho, Iowa, Nevada, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, West Virginia and Wyoming. The figures for the territory of Hawaii will appear in the report, but

they are not included in this summary.

The death rate from pneumonia increased from 123.5 per 100,000 in 1919 to 137.3 in 1920. For chronic diseases of the heart the rate increased from 131.0 to 149.9; for cancer, from 80.5 to 83. Some of the other diseases for which the rate increased are whooping cough, measles, cerebral hemorrhage, congenital debility and malformations, puerperal fever, scarlet fever, and appendicitis. The fatalities caused by automobile accidents and injuries show an increase from 9.4 per 100,000 in 1919 to 10.4 in 1920.

A marked decrease is shown in the death rate from tuberculosis, which was 114.2 in 1920 as compared with 125.6 in 1919; also in the death rate from influenza, 71.0 in 1920 against 98.8 the year before. The death rate from suicide declined from 11.4 in 1919 to 10.2 in 1920. There was a decline also in the rate for typhoid fever and in that for accidental drowning.

NEW PUBLICATIONS OF WEST VIRGINIA GEOLOGICAL SURVEY

New edition of coal, oil, gas, limestone, and iron ore map, thoroughly revised, showing oil and gas pools, many anticlinal lines not heretofore shown, and also booklet giving the names and postoffice addresses of all the principal coal mining operators in West Virginia up to July 1st, 1921. Scale, 8 miles to the inch. Price, folded in strong envelope and delivered by mail, $1.00; 6 copies for $5.00. Make remittances to West Virginia Geological Survey, Box 848, Morgantown, West Virginia.

NEW AND NONOFFICIAL REMEDIES

Eastman Barium Sulphate for Roentgenology.—A brand of barium sulphate for Roentgen-Ray work—N. N. R. (See New and Nonofficial Remedies 1921, p. 58). Eastman Kodak Company, Rochester, N. Y.

Kalmerid Germicidal Tablets Potassium Mercuric Iodid.—Each tablet contains mercuric iodid 0.29 gm., potassium iodid 0.58 gm., ammonium chlorid 0.12 gm., eosin "Y" 0.0005 gm., and yields, when dissolved in water, potassium mercuric iodid 0.5 gm., with an excess of potassium iodid. For a discussion of the actions and uses of potassium mercuric iodid, see New and Nonofficial Remedies 1921, p. 198. Davis and Geck, Inc., Brooklyn, N. Y. (Jour. A. M. A., Nov. 12, 1921, p. 1573).

Iodipin 10 per cent.—An iodin addition product of sesame oil containing from 9.8 to 11.2 per cent. of iodin in organic combination. It acts in the system similarly to the inorganic iodids. It is not broken up in the stomach, but a portion of the iodin is split off when it enters the intestine; the remaining compound is readily absorbed, and, as in the case of other fats is largely deposited in the tissues, where it is slowly split up. Because of this behavior, the action of iodipin 10 per cent. is exerted more slowly than that of the inorganic iodids. The dose is from 4 to 16 cc. (1 to 4 fluidams) three or four times a day. Iodipin is not marketed as such, but in the form of iodipin tablets 8 grains. Merck and Co., New York (Jour. A. M. A., Nov. 19, 1921, p. 1655).

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., Editor
C. R. ENSLOW, M. D.
J. E. RADER, M. D. Assistant Editors

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

ADVERTISEMENTS

Advertising forms will go to press not later than the 10th of each month.

All advertisements must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

Editorial Office: 804 Lincoln Place, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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SIXTH DISTRICT—R. H. Dunn, Charleston, one-year term; J. W. Moore, Charleston, two-year term.

PHYSICAL DIAGNOSIS

A paper appears in this issue which is seems to your editor is worthy of a lot of thinking. Just read it and then take a personal inventory.

Some years ago a physician whom I regard as a peer among surgeons dealing with fractures and dislocations, told me that I must learn to see with my fingers and use the radiograph to confirm my diagnosis in bone work. I quit bone work. He had learned it when there was no X-Ray.

Very recently at a social gathering of very intelligent ladies the question of physicians came up, as it always does. Between seventy and eighty per cent of those present "climbed our necks," so to speak, saying that the "Doctors" did not do anything for "sick folks" any more but tell them what specialists to call in. Sometimes it seems to your editor that the criticisms of our profession are not altogether without grounds.

Are we as good as we should be? Do we treat sick folks? Or are we just scientific automatons.

A WORN OUT SUBJECT

It has long since become a matter

that is very tender to talk of County Societies, yet what can one do?

The Secretaries seem to think that no one is interested in what goes on in their local bodies. Just why they should feel so is beyond our comprehension.

There is one in our state, though, who wishes to know what to do with his "lazy members." His appeal to Dr. Ashworth follows, expurgated of course, and an editorial from Clinical Medicine giving advice as to the best method of treatment for killing a County Society.

COUNTY SOCIETIES

The following is from a County Secretary in West Virginia.—(Editor.)

I want to know whether or not there is anything in the by-laws and rules of the State Society governing the admittance of physicians to local societies where such physicians willfully absent themselves from every meeting during each year.

In our local society we have fourteen men who have not attended a single meeting this year; about fifteen men who have only attended one meeting. If there is anything in the by-laws governing the above matter, I would like to know it, and see that these men are turned out of the society until they are ready to co-operate with us. I feel that a physician in a society that displays no more enthusiasm and willingness to co-operate with his society than the number of men referred to above is really a detriment to the society. The conduct of such men is gradually carrying our local society to ruination, and I am anxious to know what steps we should take to hard out the proper treatment to these men. We have only been able to have but three meetings this year and the officers of the society are about ready to give up the battle. I hope you may be able to pass along to me some information that will enable us to deal with these men and wake them up and make them appreciate our society. I don't believe that we will ever be able to have a society really worth while until these men have been "turned out"—really see their predicament— and then they will come back howling, begging and pleading to be reinstated.

THE VALUE OF MEDICAL SOCIETIES.

Just what a medical society means to the active practitioner, can hardly be estimated. It is there that we come in contact with each other and learn what good fellows the others really are, and how, through our little apparent antipathies, we have drifted apart from each other; matters of slight importance having generally caused such estrangements and misunderstandings. It makes no difference how little or how much a man may know; through the deliberations of his society, he will pick up some valuable knowledge and ideas that will give him food for thought and will cause him to study, investigate and ascertain the facts.

Again, a man may be ever so clever; yet no matter where you go, you will always find some one in advance, with bright, clever thoughts and from whom you may gain knowledge. All men do not read alike or the same literature. One man will discover what the other has overlooked, or he will pass it along at the society meetings.

Team work is being more and more

recognized as the best method to get results and the only way the average medical man can get it is through his society. There we interchange our experiences and bring them up for discussion; there we find help in understanding the obscure conditions we meet in our cases. The assistance that we get unravels those atypical and mystifying cases that have caused us wakeful nights and hours of study.

We have a good patient, a close friend or relative for whom we are anxious to secure the best possible results. Our mental resources may be blunted through over great anxiety. There are limitations to the brain faculties and these are the times when the faculties do not act with normal alacrity. We do not possess the initiative to put into effect the proper knowledge we have, whereas a hint or a suggestion from an outsider will awaken or stimulate the dormant neurones to their duty and rays of sunlight will pierce the clouds, clearing away the mist of our befogged brain.

To have a good, active society, there must be cooperation and each man must add his bit. Every physician should attend the meetings, unless he is detained by some matters over which he has no control and which, we know, many times, handicap the medical man. You do not have to write a paper unless you wish, for, there is always some one who does. If you do write a paper, ask that it be freely discussed and do not take exception to any constructive criticism. The discussion I look upon as the most valuable part of the paper; for, it brings out many points for consideration that one's own mind is unable to comprise.

Right here, I may say that many good papers are not written and are thus lost because of the timidity of the writer who fears criticism and apprehends that the matter he may present is not technical enough. There is a lot of rich knowledge stored away in the archives of your cranial vaults that would be of great help to your brother practitioners. A presentation of the experiences you have had and the happy results you have gotten by the use of this or that method might help others. It is not the greatest achievements or the newer wrinkles that always count, but the things that work well in our everyday life. I have often heard medical men give as an excuse for not attending medical society meetings that some one would get up and tell of the remarkable things that he did, or of something that was of no value to the general practitioner. Such may at times be a fact. The man who is doing special work, out of the ordinary, may relate to the society the theories he is working on, and such theories, while they might not interest the average man, develop facts that do help every one. Without research and study, the art and science of medicine would come to a standstill. To be able to present to the world a ray of hope in this serious game of life, helping our fellow-man in distress is the greatest fulfillment of our usefulness. The modest, retiring man who appears of little consequence is sometimes underestimated and, yet, he is bubbling over with the richest kind of valuable information that only needs the right kind of interest manifested and some

cordial encouragement to unfold the methods he had to use to handle obstacles that only could be overcome by ability, judgment and rare skill.

The meeting place of the society should be the one place where we can be human and lay aside all selfishness, antipathies and evil thinking, learning from and teaching each other those things in medicine that will bring health and happiness to our patients. The association will put us in closer touch with each other, showing us the true worth of our fellow workers and making us realize what we have missed by not knowing them more intimately.

The public is fast learning that the real doctors are the ones who attend society meetings, and keep up with the advances in medicine. In those who are truly in love with their profession and their scientific work, they place every faith, confidence and responsibility because they think they are on the job. Shrewd business men investigate the qualifications of a medical man, as to his proficiency, before employing him, and one of the first things asked is, what societies does he attend and will they endorse him. Perhaps, because I have gained so much benefit, enjoyed the papers and discussions and the meeting with my medical confreres, my enthusiasm may be greater than it should be. However, I have expressed my ideas and hold the society close to my heart and, like every one else who does any serious thinking, I think that I am right.

"It ain't the guns nor armament, nor
the band that they can play
But the close cooperation that makes
them win the day.
It ain't the individual, nor the army
as a whole,
But the everlasting teamwork of
every blooming soul."

—Rudyard Kikling.

LOUIS deM. BLOCKER.

Cincinnati, Ohio.

—Clinical Medicine.

An impressive lesson, we find, is taught in the subjoined little skit which appeared first in the Pittsburg Medical Bulletin and which we have clipped from a recent copy of the Official Bulletin of the Chicago Medical Society.—Ed.)—Clinical Med.

TEN WAYS TO KILL A MEDICAL SOCIETY

Don't go to the meetings.

If you do go, go late.

If the weather doesn't suit you, don't think of going.

If you do attend a meeting, find fault with the work of the officers and members.

Never accept an office, as it is easier to criticize than to do things.

Get sore if you are not appointed on committees; but, if you are, do not attend meetings.

If asked by the chairman to give your opinion on some matter, tell him you have nothing to say. After the meeting, tell everyone how things should be done.

Do nothing more than absolutely necessary; but, when members use their ability to help matters along, howl that the institution is run by a clique.

Hold back your dues, or don't pay at all.

Don't bother about getting new members. "Let George do it."

COMPULSORY ABORTIONS

Russia has abolised all laws against abortion; furthermore all abortions in Russia must be performed free. Any woman who wishes to have an abortion performed just steps into a municipal or government hospital and has the thing done without any questions and without cost. Private practitioners may perform abortions, but they must not charge any fee whatever. It seems that compulsion has about gone the limit in Russia. We have in America a goodly number of soviet government bugs both in and out of the medical profession. We think it is about time for a house cleaning.

State and General News

Dr. C. F. Sayre, formerly located at Charleston, is now at Putney, West Virginia.

Drs. J. A. Guthrie, J. E. Rader and R. J. Wilkinson of Huntington, attended the meeting of the College of American Surgeons held in Philadelphia in October .

Dr. T. W. Moore, member of the Council of the Southern Medical Association of Huntington, attended the meeting of the association held in Hot Springs, Arkansas.

Born, to Dr. and Mrs. W. H. Price of Chattaroy, a daughter, October 27, at Huntington.

Dr. J. F. York of Kenova, died recently at Cincinnati, Ohio, of paralysis. Dr. York was at one time Mayor of his home city.

The meeting of the C. & O. Surgeon's Association held at Richmand, in October, was attended by Drs. C. R. Enslow, W. E. Vest and R. J. Wilkinson of Huntington.

Dr. W. E. Vest of Huntington read a paper at the Southern Medical Association at Hot Springs, and papers were discussed by Drs. T. W. Moore, W. D. Hereford of Huntington and Dr. A. A. Shawkey of Charleston.

Governor Morgan recently appointed Dr. Powell of Fairmont superintendent of state hospital number three at Fairmont. He succeeds Dr. G. M. Ramage, who resigned.

Dr. James Boyce Taylor of the medical staff of the C. & O. Hospital, at Huntington, sustained a compound fracture of the right leg below the knee, a severe blow on the head and a number of minor injuries when struck by an automobile near his home recently.

Dr. Robert K. Buford, who has been in charge of the Sheltering Arms Hospital at Hansford, has located at Charleston. His offices are in the Kanawha Valley Hospital and he is confining his work to general surgery and consultation.

Dr. George W. Tooley of Huntington, died recently in a local hospital. Dr. Tooley had been a general practitioner in that city for 16 years.

Dr. W. W. Strange of Huntington, has gone to Sheltering Arms Hospital at Hansford.

Dr. J. Ross Hunter, who has been at Huntington for a number of years, has moved to Charleston. He will be Surgeon-in-charge of the Sheltering Arms Hospital at Hansford.

Sir Harold Stiles, Regius Professor, University of Edinburgh, has been visiting his fellow graduate, Dr. Tom Williams, in Washington. Sir Harold came to America to give the convocation address before the American Col-

lege of Surgeons, and has visited several of the chief surgical clinics also.

PHILLIPPINES NEEDS MORE DOCTORS.—We have in this country a tremendous problem of health awaiting the intervention of doctors. Infant mortality, tuberculosis, venereal diseases, industrial hygiene, school children inspection are all problems to be solved by the doctor. The doctor cannot escape his share of responsibility in some medico-social questions in this young democracy, namely, housing, education, recreation, conditions of industry, conditions of agriculture, sobriety, cleanliness of living, prostitution, the penal law, the causes of certain crimes, the integrity of family life.

The total mortality in the Philippines is 26 per 1000 as against 13 per 1000 in other countries. The infant mortality in this country is at present reduced to 297.90 per 1000 as against 100 per 1000 in other countries. The mortality from typhoid fever is 32 per 100,000, while in New York is 3.82 per 100,000. Death from tuberculosis is 504 per 100,000 as against 172 per 100,000 in New York.

We have at ppresent 969 physicians in the Philippines; that is, one physician for each 11,000 inhabitants. It is estimated that a population, to be safe regarding health, should have at least one doctor for each 3,000 inhabitants. In the United States there is one physician for 726 inhabitants. Therefore, we need about 3,000 physicians for our 10,000,000 population.—(From a speech of Dr. Jose Albert, Acting Dean of the College of Medicine and Surgery, at the Rotary Club Luncheon, August 11, 1921.)

From the Journal of the Philippine Islands Medical Association.

A NOTICE FOR PUBLICATION

The Child Welfare Commission, created by the last session of the Legislature, has opened up an office in the Capitol Building in Charleston during the past week.

This Commission plans to make a study of the laws, their administration, and the conditions existing in the entire field of child welfare, embracing not only the normal child, but the dependent, neglected, defective and delinquent child.

A report is to be made at the next session of the Legislature as to the findings of this Commission, with any recommendations which will be necessary for the strengthening of the foundations of a sound, co-operative and progressive state-wide child welfare program.

The Kanawha County Medical Society will have Drs. Irwin Abell, Wm. A. Jenkins and Philip Barbour, professors of the University of Louisville, Ky., with them at their meeting December 6th. The Doctors will give addresses.

CONGRES OF THE AMERICAN COLLEGE OF SURGEONS

The Congress of the American College of Surgeons was held in Philadelphia, October 24-28. Among those from abroad were: Drs. H. C. Jacobaeus, Stockholm, J. Schoemaker, The Hague and Dr. F. de Quervain, Berne. Hospital Day, October 24, the morning session was given over to a discussion of hospital standardization. Dr. John B. Deaver was inaugurated as president, and an address was made by the retiring president, Dr. George

E. Armstrong. A $500,000 research academy as a monument to American surgery, a tribute to the late Dr. John B. Murphy, it was stated, will be built by the college, in conjunction with the citizens of Chicago, on a site adjoining the present home of the college. At a meeting October 27, the college pledged to raise $150,000 within the next year, and $30,000 in individual pledges of $1,000 down to $250 was raised within a half hour. Dr. George W. Crile, Cleveland, presided at the meeting, which resolved itself into a spontaneous tribute to Dr. Murphy. Officers elected for the year 1922-1923 were Drs. Harvey Cushing, Boston, president; Henry Sherk, Pasadena, Calif., first vice president, and George P. Miller, Philadelphia, second vice president. One new member of the board of regents was chosen, and four re-elected: Daniel F. Jones, Boston, new member; George W. Crile; Alexander Primrose, Toronto; Albert J. Ochsner, Chicago, and George E. de Schweinitz, Philadelphia. The next meeting will be held in Boston. The closing session, "The Convocation," was held Friday evening, October 28. After the procession of regents and honorary guests and the invocation by Cardinal Dougherty, Archbishop of Philadelphia, Prof. Harvey Cushing, Harvard Medical School, introduced the delegation from the Royal College of Surgeons of Ireland, who attended the congress in order to confer honorary degrees on Drs. George E. Brewer, New York; W. J. Mayo and C. H. Mayo, Rochester, Min.; A. J. Ochsner, Chicago; W. W. Keen and Richard Harte, Philadelpphia; George W. Crile, Cleveland, and John M. T. Finney, Baltimore. Seven hundred and nineteen surgeons from all parts of the country were industed into the college by the president.—A. M. A. Jour.

Drs. J. B. Winfield and R. L. Osborn of Clarksburg, W. Va., both of whom attended the former University College of Medicine, in Richmond, were visitors in Richmond, last month. They were taking a motor trip through Virginia, Maryland, and West Virginia.

FAIRMONT, W. Va., Nov. 19.—Dr. Cyrus F. Boyers, aged 79 years, died at his home here this evening very unexpectedly. Since early manhood he had been a practicing physician here. Five of his seven sons were also physicians, one being deceased.

Dr. and Mrs. Leo Covert of Moundsville, have returned from spending their vacations at Cleveland and Pittsburgh.

Dr. Benjamin F. Bone of Moundsville, has returned from his hunting trip in Canada.

Dr. W. E. Grim of Cameron, is on the sick list.

Society Proceedings

Moundsville, W. Va., Nov. 17, '21.
Jas. R. Bloss, Editor,
Huntington, W. Va.

My Dear Doctor:—The Marshall County Medical Society met in regular monthly session, Tuesday, November 8th at 4 P. M., at the Marshall County Court House. The meeting was called to order by the President, Dr. A. F. Compton. The minutes of the previous meeting were

read and approved. There being no other business to come before the society, Dr. W. S. Fulton of Wheeling read a paper on "Intestinal Obstruction." We have all read and heard quite a lot on intestinal obstructions, but this really was a classic. This society realizes that Dr. Fulton is one of the leading surgeons in this part of the country.

The paper was discussed by Drs. Compton, McCuskey, Ashworth, Rinehart, Covert and Matson. There were many points of interest brought out during the discussions.

The meeting was exceptionally well attended and thoroughly enjoyed by all. Our society has been very fortunate this year in securing some of the best men in the country to come here. Among them have been Dr. Geo. Harding, Jr., brother of President Harding. Dr. Harding is a nerve specialist from Columbus. We have had Dr. Carl Sawyer of Marion, Ohio. He is a nerve specialist and owns the Sawyer Sanitarium.

This society held a meeting in the Park Theatre several weeks ago during the campaign to try to interest the public in the cancer situation. Dr. F. Le Moyne Hupp of Wheeling, read an interesting paper on the importance of early diagnosis of cancer. It was an excellent paper. The meeting was well attended, and the laymen present expressed great surprise at the number of deaths each year from this disease.

D. B. EALY, Sec'y.

Surgery

ABDOMINAL OPERATIONS UNDER PROCAINE

Hans Finsterer, of Vienna, (Amer. Jour. of Surg., July 1921) does laparotomies under local anesthesia which most of our surgenos have scarcely considered possible. He has done 157 stomach resections for cancer without the help of ether, painlessly. In some other cases, requiring more than three hours to complete, the amount of ether given supplementing oral anesthesia, was only 20 to 100 mils (Cc.); which is very small indeed.

Further, he has operated under local anesthesia for intestinal obstruction, peritonitis, duodenal ulcers, hemorrhages and appendicitis; has performed resection of the large intestine; and even extirpated the gallbladder. He has done the last named operation 104 times without an immediate death. As for appendectomies, he did 226 interval operations without any ether. When there are severe adhesions and in acute cases, however, he uses ether, usually about 20 mils (Cc.)

Procaine is his anesthetic. The opening and suturing of the interior abdominal wall may be done painlessly with fan-shaped injections on the outer margin of the rectus, using a 0.5-percent solution. Also, the conducting nerves must be blocked at least a hand's breadth centrally from the incision. As a mesentery contains pain-conducting nerves, this also must be blocked.

Fatal lung complications are almost entirely avoided by his method. It makes some operations less haz-

ardous for the aged.—Clinical Medicine.

POTASSIUM NITRATE IN CANCER

That cancerous lesions are caused by the ingestion of too much common salt, or sodium chloride, may be quite true as affirmed by Robinson (Therap, Leaves, July, 19221). An excess of this salt, beyond the power of the body to utilize and to oxidize further or dispose of as waste, may well be that irritant to the cells which ends in cellular and tissue degeneration such as we have in lesions of this class, and perhaps in others too.

If so, the treatment proposed is nothing if not scientific. In accordance with a well known chemical reaction, potassium nitrate added to sodium chloride results in the formation of sodium nitrate and potassium nitrate which chloride is readily appropriated by the cell.

What merit Roentgen rays have against cancer is said to be due to the fact that they act by bringing about the oxidation and removal of the sodium-chloride excess; which the cell appears incapable of accomplishing by its own efforts.

Is it not significant that cancer is never found where the use of table salt is not in vogue but is rather shunned?

The idea is being capitalized with enterpprise, and perhaps to the point where some might regard it as quackish. No matter, it seems worthy of investigation.—Clinical Medicine.

MEDICINE

DECLINE IN THE DEATH RATE

Statistics compiled by the Metropolitan Life Insurance Company show a marked decline in the death rate during the last six months. The rate for the half year is 23 per cent below that for the first half of 1920. The most marked declines are in influenza, pneumonia, tuberculosis, and organic heart disease. The death rate for influenza for the first six months of this year was about one-ninth of that for the first half of 1920; likewise the mortality from pneumonia for the first half of 1921 was about one-half that for the corresponding period of last year. These decreases, together with drops of 19 per cent in the tuberculosis rate and 9 per cent in that for cardiac diseases, are the chief elements responsible for the remarkably low mortality rate. Cerebral hemorrhage and Bright's disease have also registered considerable declines. Measles and whooping cough were slightly lower than for last year. —Ill. Journal.

The auto foot disease is called acceleritis. The name of the ailment is derived from the mechanical cause of the affection and not from the anatomical parts involved. The pain and inflammation is due to the constant pressure of the foot on the accelerator of the car, which has a tendency to mispplace the metatarsal bones.—J. of Kansas Med. Society.

On account of its antiseptic action, its antispasmodic effect on bronchial spasm, its sedative effect on the larynx, benzyl benzoate should be an ideal remedy in pertussis. Reports from various sources indicate that it is at least palliative, lessening the violence and number of the paroxysms. —J. of Kan. Med. Society.

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ABDOMINAL CAESAREAN SECTION, WITH REPORT OF CASES

Read before the Surgical Section of West Virginia Medical Association, at Charleston, May, 1921, by Chas F. Hicks, M. D., F. A. C. S., Welch, West Virginia

Dr. Sawyer of Berlin, in 1882, modified the technique of the Caeserean operation, and thereby, made it an operation of comparative safety; its mortality has been gradually lowered until at the present time, in favorable cases, it is not more than two per cent. With the operation thus shorn of its terrors, it is no wonder it is being more and more resorted to, where, for one reason or another, the passage of the child through the birth canal is attended by difficulties.

While Obstetrics, perhaps, is one of the most conservative departments of Medicine and Surgery, we cannot but think at times, the physician has been ultra-conservative; many times a clean, quick delivery by the abdominal route is much safer than the more prolonged and mutilating high forceps delivery, with the associated vaginal and perineal lacerations, and the severe and often times fatal pressure upon the presenting head. But, this very case of performance with its accompanying good results should not lure the surgeon to the abuse of this procedure.

It is not the purpose of this paper to make an exhaustive study of the many indications for abdominal Caesarean section, such a review, while it might possibly be made interesting and profitable to the Obstetrician, would be out of the place before our section on Surgery, whose work, as a rule, and from choice, is not along obstetrical lines. The classification made by Peterson of Ann Arbor, seems most suitable for a consideration of the indications for abdominal Caesrarean section. It includes the more common conditions one is liable to meet with, in the ordinary course of hospital practice.

1st. Obstructions to Labor:
(a) Pelvic contractions.
(b) Fibromyoma.
(c) Ovarian tumors.
(d) Stenosis of Cervix and Vagina.
(e) Miscellaneous.

2nd. Uterine Haemorrhage:
(a) Concealed Haemmorrhage.
(b) Placcenta Previa.

3rd. Constitutional Crisis.
(a) Eclampsia.

We have come to a full realization of the fact that, the pregnant uterus, where sepsis from below is present, or liable to develop, cannot be incised by the abdominal route without grave danger of a fatal issue from peritonitis, unlike acute abdominal catastrophies of surgical lesions. This difference must be kept in mind. Undoubtedly the results of abdominal Caesarean section will be still more satisfactory if the indications and contra-indications are studied more intelligently.

Routh, of London, collected one thousand two hundred and eighty-two cases of Caesarean section and found when attempts had been made at delivery by forceps, or where repeated examinations had been made, the mortality was above thirty-four per cent.

It would be impossible to take up the classifications as given and discuss all its phases. I will take up the indications for abdominal Caesarean section in those which I desire to report. My experience is limited to only sixteen cases, with a mortality of three for the mother and two for the child. I cannot help but feel that the three women who died would probably have died whatever method of treatment had been adopted. The sixteen cases will be classified as follows:

Two cases, Obstruction to Labor, due to contracted pelves.

One case, Obstruction to Labor, due to impacted cyst.

One case, Miscellaneous, Labor complicated by intestinal obstruction.

One case, Miscellaneous, owing to a plastic operation for a complete rupture of the perineum, eleven months previous.

Eleven cases, Constitutional disturbance, Eclampsia, in which we lost three mothers and two babies.

Obstruction to Labor, due to contracted pelvis—Peterson states, that probably more Caesarean sections will be performed for this indication than for any other, however, Williams claims that there is where the greatest abuse of Caesarean section occurs. In contracted pelvis, abdominal Caesarean section has now become an elective operation, and is undertaken with full confidence that in clean cases the most satisfactory results will follow. We are taught that the operation is imperatively demanded in cases where the conjugata vera measures sixteen cm. or less. I have had no experience, whatsoever, in the use of the pelvimeter, hence I will make no attempt to go into the measurements of the contracted pelvis. It must be borne in mind, however, that there is much uncertainty as regards the pelvic measurements. No doubt, some of us, to our chagrin, have had this experience.

In the primipara, with moedrate contracted pelvis, with true conjugata of sixteen cm., should, of course, be given a test of labor, and usually has, before she is referred to the sur-

geon for operative interference. If she is not able to have a child through the natural passage, then abdominal Caesarean section is the method of choice.

The following is a case illustrating this point: Case I Obstruction of labor due to moderate contracted pelvis—

Mrs. C., age 20 years, primipara, with moderate pelvic contraction, was in labor eighteen hours, with no engagement of head; the patient, fortunately, had not been subjected to repeated examinations, there was very good dilatation, the membranes unruptured; Ceasarean section was advised and accepted,—mother and child made good recovery. Had the case been neglected and had been repeatedly examined, and attempt made to deliver from below, abdominal Ceasarean section would have been strictly contra-indicated. Under the circumstance it would have meant sepsis and probably death of the mother.

Case II, Obstruction to labor owing to Contracted Pelvis.

Mrs. S., age 27, Multipara; entered hospital April, 1914, with history of about seven months pregnancy; she had had two children destroyed in their delivery; she was very anxious for a living baby, with a history of having had two babies craniotomied, I advised that she return in about six weeks for Abdominal Caesarean Section. She accepted the advice and was operated upon in June, mother and baby made nice recovery. This case of course is different from case No. I., here a multipara, who had the test of two labors and lost both children from operation below, made it unquestionably, elective Caesarean section, which was done at the onset of labor. This patient was so well pleased with the results of this operation, she wrote me three years later that she had entered a hospital in Penn. for another Ceasarean section.

I have often thought, that in contracted pelves that the patient is treated too conservatively; with the result of destroying the baby in order to deliver it. We often hear of these cases; it is possible that the conclusion could have been reached before labor, that the measurement is such, that a natural birth is impossible.

Obstruction to Labor due to an Impacted Cyst.

Case III, Mrs. C., age 20, primipara.

After being labor twelve hours, called her physician, who found labor complicated by a mass in the right fornix. Upon examination, I found a tumor choked in right pelvis, and head not engaged; abdominal Caesarean section was advised and decided upon. A vigorous male child was delivered. The tumor was gently lifted from its position, but not removed, I saw no special indication for its removal at this time; it would have, of course, prolonged operation, the patient had been examined two or more times, and was somewhat fatigued from the trip to the hospital, plus the operation. She was advised of her condition and suggested that she return in one month for an operation. She did not return until she weaned her baby, nine months later. Wish to state, at the subsequent operation, there were no adhesions to the uterus, and a faintly white line could be seen where the uterus was opened. The tumor removed was a dermoid cyst. The patient since has had three children,

has had no trouble in her confinements.

Pregnancy complicated by pelvic tumors is not common. Luckily, women with uterine fibroids, either do not conceive, or else they abort within the first three months of gestation. I have had two cases where the specimen of uterine fibromyomata complicated by early gestation, one of probably two and one-half months and the other probably three months. When pregnancy is complicated by ovarian tumor, operation for its removal is safe and reliable. In the case just cited the patient experienced no trouble during her pregnancy, nor did she give a history which would lead one to suspect pelvic tumor before gestation.

Miscellaneous indications for Abdominal Caesarean section, Plastic Operation for a complete rupture of perineum, eleven months previous.

Case No. IX, Mrs. B., age 25.—Entered hospital June, 1915, for a plastic operation on perineum; she had had one baby six months previous, instrumental delivery, with a eomplete tear and the loss of the baby. She was treated several days in order to get the parts in good condition, then a Kelly's plastic operation was done. I advised her when she left the hospital that in case of subsequent pregnancy, she enter a hospital for her delivery; explaining the possibility of the perineum being retorn. In less than eleven months she re-entered for confinement. I suggested to her the advisability of abdominal Caesarean Section, for the following reasons;

The previous labor was tedious and difficult, requiring forceps with the loss of the child, and a complete rupture of the perineum. The plastic operation had been done little more than nine months, that there was a strong possibility of the perineum being re-torn. She accepted the advice. At the onset of labor a few weeks later, abdominal Caesarean section was done, and mother and child made good recovery. Since then she has had two babies.

Attempts at delivery through a contracted outlet, so early after an extensive plastic operation, no doubt, even under skillful handling, meant a second tear. Under such conditions an abdominal Caesarean section is indicated and should be performed as an elective operation.

Miscellaneous indication, Labor complicated by Intestinal Obstruction,—

Mrs. M., age 40, primipara,—was brought to the hospital by her physician, December, 1919, with a history of being in labor and with some obscure abdominal complication.

The patient was a very large obese woman, weighing 220 pounds. I had operated upon her eight years previous for an acute ruptured appendix, which, of course, necessitated drainage, and as a result she had a ventral hernia. From her history, she had been in labor about twelve hours, when pains became colicky in character, and vomiting with abdominal distention and general abdominal pains. Enemas were given with no results; examination in general was most unsatisfactory; cervix was dilated, mebranes unruptured. After observing her for a few hours, we made a diagnosis of intestinal obstruction, probably from old adhesions in scar, complicated by labor.

We advised operation, with consent to do a Ceasarean section, which was accepted.

Upon opening the abdomen, the distended coils of intestines pushed themselves out of the wound; in passing my hand under the old scar, found a band of adhesions adherent, with a loop of intestines wrapped around the band. We immediately did a Caesarean section, and then released the obstruction. Mother and baby made good recovery. In this case Ceasarean section was imperative; fortunately the obstruction was not more than twenty-four hours standing; no doubt the loop of intestine became wrapped around the band during uterine contractions.

Constitutional Disturbance,—Eclampsia,—

Eclampsia is the gravest complication in obstetrics, grave, because of its often sad results, the loss of both mother and child. Upon whatever theoretic basis we may predicate the etiology of eclampsia, whether of foetal, maternal or combined origin, the one incontrovertable fact is that pregnancy at least is necessary; for without pregnancy, there can be no eclampsia.

There can be no doubt but what the majority of physicians believe in the immediate emptying of the uterus as soon as the patient has been seized with eclamptic convulsions. It should be emptied quickly and with the least possible trauma. Therefore, the therapeutic conclusion must be, that in eclampsia, prompt termination of the pregnancy, through the quickest possible delivery, consistent with safety, is of primary importance. How the termination of the pregnancy should be effected, must be governed by the condition of the cervix and frequency of the convulsions. If the cervix is already dilated, rapid delivery is easily accomplished with forceps.

When the cervical canal is rigid and not unfolded, manual dilatation, or divulsion of the cervix probably aggravates the eclamptic siezures; in such cases, in the primipara, undoubtedly, abdominal Caesarean section will give more satisfactory results, rather than the wasting of valuable time in operating from below. No one would think of resorting to abdominal Caesarean section in eclampsia if the cervix were sufficiently dilated to permit delivery by forceps, or by version and extraction, or if the cervical canal, sufficiently softened to permit safe manual dilatation; on the other hand, I hold that the operation is frequently indicated in primaparous women, who present an unobliterated and rigid cervix, and has had more than one convulsion, and, ALWAYS in those who are unconscious and in deep coma.

In 245 cases of eclampsia, cited by Peterson, where there was no sepsis or very little chance of sepsis prior to the abdominal Caesarean section, the maternal mortality was only twenty-four per cent. In 317 cases, the foetal mortality was five and one-half per cent.

Abdominal Caesarean section for Constitutional crisis—Eclampsia—

In this class, of eleven we lost three mothers and two babies. Of the fatal cases all were primiparous, each had had several convulsions, the os was not dilated nor soft, and treatment by the attending physicians had failed to prevent or control convulsions. One was totally uncon-

scious, one was suffering from toxemic blindness, and had had about fifteen convulsions. One lived two days, then succumbed, apparently, to the toxemia, never regained consciousness.

The eight cases that recovered, five were primiparous, each having had one or more convulsions. One was in deep coma, and remained so for three days, then made recovery; one had had twenty-one convulsions, was unconscious when admitted, made good recovery; Urinalysis showed large ring of albumen, and systolic blood pressure very high in four cases.

Three of the eight cases that recovered had one or more convulsions, after operation, but responded to treatment; proctoclysis; sodium bicarbonate, oz. ½ to pint, was used as routine treatment, in conjunction with other therapeutic measures.

As to the technique of abdominal Caesarean section, the skin incision is made as high as possible, and not necessarily long; when the uterus is emptied and sinks down there is no danger of adhesions between the abdominal and the uterine scars.

The uterine incision is made from near the top of the uterus, downward, as a scar in this situation is not so liable to strain and stretching, as one in the lower uterine segment would be. The uterine incision is closed by three layers of sutures.

The after treatment is the same as for any other laparotomy or any puerperal patient.

CAESAREAN SECTION

Read before the Surgical Section of the West Virginia Medical Association, Charleston. May, 1921, by Dr. W. H. Wallingford, Princeton, W. Va.

The origin of the term Caesarean section has given rise to a great deal of discussion, it being popularly supposed that Julius Caesar was the first person to be delivered in that manner, and that he received his name from that fact. There is much to prove this to be untrue. At the time Julius Caesar was born, the operation was performed only on dead mothers. Julius Caesar's mother lived many years after his birth, as proven by his letters to her during his wars. Julius Caesar was also not the first man by that name. The term is probably derived from the Latin word Cedere, meaning "to cut."

Definition: Caesarean section is the removal of a child from the uterus through an incision made through the abdominal and uterine walls. The term does not apply to the removal of a foetus after rupture of the uterus, or ectopic pfegnancy, or an abdominal pregnancy.

There is a popular belief that this is a modern operation, but literature discloses the fact that it is a very old one. There was a law as early as 715 B. C., that expressly commanded that the child be removed before the burial of its mother.

History: The history of Caesarean section is divided into three epochs or periods. The first period extended from the earliest time to the beginning of the sixteenth Century. The second extended from the sixteenth Century to 1876, when

Porro devised his operation for the removal of the uterus after Caesarean section. The third extended from 1876 to the present time. During the first period, the operation was performed only on dead mothers in an endeavor to save the child. During the second period, it was performed on the living only as a last resort when all other measures had failed; although accompanied by a frightful mortality, it was generally accepted as the proper method in such cases. It is generally accepted that Trautman did the first Caesarean section on a live mother in 1610. During this period, sutures were not used and the abdominal and uterine incisions were not closed, the mother nearly always dying of hemorrhage or infection. At the beginning of the third period, Porro revolutionized the operation by advocating a supravaginal hysterectomy after the reremoval of the child and sewing the uterine stump into the lower angle of the abdominal wound. This wet with such good results that the operation was performed much oftener than formerly. In 1882 Sanger advised the use of sutures to sew the uterine and abdominal walls, and this operation soon displaced Porro's operation to a great extent, as it did not sacrifice the uterus.

Indications for Caesarean section are divided into

1. Absolute.
2. Relative.

An absolute indication is where the pelvicc canal is so narrowed or obstructed that the child cannot be delivered by the vaginal route with safety to the mother.

A relative indication is a condition where the child can be delivered by the abdominal route with greater safety to the mother and child than by the vaginal route.

Absolute indications—

(a) Contracted pelvis with conjugate vera of 7 cm. or less.

(b) Exostosis of the pelvic bones.

(c) Irremovable tumors.

(d) Extreme stenosis of the cervix or vagina.

(e) Neoplasms or large cysts of the ovary prolapsed before the child.

(f) Mammoth child.

(g) Advanced carcimona of the cervix.

(h) Pelvic outlet of 7 cm or less.

(i) Malignant tumors of rectum, (occasionally).

Relative indications—

(a) Contracted pelvis but with conjugate vera between 7 and 9 cm.

(b) Placenta previa.

(c) Eclampsia.

(d) Prematurely detached placenta.

(f) Mammoth child.

(g) Habitual death of foetus in labor by vaginal route.

(h) Anomalies of the reproduction organs in the mother.

(i) Threatened rupture of uterus.

It is obvious that there are no hard and set rules for the relative indication and the operator has to use his judgment in such cases.

It is also obvious that an absolute indication in one case may become a relative indication in another case. For instance a mammoth child in a mother with a markedly contracted pelvis would become an absolute indication; but in a mother with a normal pelvis or but moderately con-

tracted, it may become a relative indication.

Contra-indications—

(a) In no case should Caesarean section be performed with an absolute indication when the foetus is dead.

(b) It should not be performed when the mother is badly infected.

(c) It should not be performed under circumstances where it is impossible to be sterile.

Kinds of operation—

(A) As to extent:

(1) Radical or Porro.

(2) Conservative.

(B) As to route:

(1) Abdominal.

(2) Vaginal.

(3) Extraperitoneal.

(4) Kronig or transperitoneal.

(A) As to extent:

(1) In the radical or Porro operation formerly, the abdomen and uterus was opened and the child removed, and then a supravaginal hysterectomy was done, and the uterine stump was brought up and sewed into the lower angle of the abdominal wound, and the stump allowed to heal by granulation. At present the stump is dropped back in the abdomen.

(2) In the conservative operation, the operation is the same as the radical until after the child and placenta are removed, and then instead of a hysterectomy, the uterine incision is carefully sewed. This operation is the operation of choice in a vast majority of cases.

(B) As to routes:

(a) Abdominal: The technique for this is similar to any laparotomy, except that special pains should be taken to prevent infection.

(b) The vaginal Caesarean section requires the same preparation as for a vaginal hysterectomy. The lips of the cervix are then grasped and pulled down, and the anterior and posterior lips incised in the median line. The child and placenta are then extracted and the incisions in the cervix are closed.

(c) The extraperitoneal operation is seldom performed since surgical technique has been perfected to its present stage. Its special field is in infected cases, and was used in earlier times when there was great danger of infection in all Caesarean sections. There have been a number of these operations, the principle differences being the line of the incision. The one most generally used, however, is Latzkos.

(d) The Kronig or transperitoneal operation is a recent operation, and is rapidly coming into favor and bids fair in time to divide honors with the conservative Caesarean section. In this operation, about one inch above the attachment of the bladder to the uterus, the peritoneum is incised transversely and the bladder stripped downward and the peritoneum upward. The lower uterine segment is then incised in the median line. Forceps are then applied and the child"s head is slowly delivered to prevent tearing the bladder or ureter, and then the placenta is removed and the wound in the uterus is closed, and then the peritoneum is closed by a continuous fine catgut suture, which is completely covered by the bladder when full. This operation has several advantages claimed for it over the conservative operation:

(1) Less liable to be followed by

infection.

(2) Less contraction of the lower uterine segment and consequently the wound heals undisturbed and leaves a better scar. Hence less liability to rupture in future pregnancies.

(3) Less liability to adhesions.

(4) Less peritoneal shock.

Prognosis:—

The prognosis in each case is a law unto itself, but in general it depends to a great extent on three things:

(1) The operator.

(2) The condition of the mother and child.

(3) The surroundings.

If the operator is skillful, the condition of the mother and child is good, and the mother is in a well regulated hospital and can have the advantages of strict asepsis, the prognosis is good. But if done in unsanitary surroundings, or the mother has been in labor a long time and subject to repeated vaginal examinations, the prognosis is often grave in such cases.

Mortality:—

Before Porro advocated his operation, the mortality was appalling, running from 52 to 100%. With the advent of hysterectomy following Caesarean section, the mortality dropped and has gradually improved until now in selected cases the mortality is not more than 1 or 2%. Taking all cases into consideration, the mortality at present runs about 10 to 15%.

Sequellae:—

The principle sequellae following Caesarean section is the greater liability of rupture of the uterus in future pregnancies, and the tendency to adhesions of the uterine incision to the abdominal wall and intestines. Adhesions of the intestines have been known to produce intestinal obstruction.

History of Mrs. C. M. Princeton, W. V.—F., W., age 31, heighth 5 ft. 1 in., weight 110 lbs., brown hair, blue eyes, fair complexion, housewife.

History of family: Mother died of tuberculosis, father died of cancer, otherwise negative.

Personal history: Had usual diseases of childhood, no other diseases. Menstrual history, normal, except irregular for first year. Married 1907. In 1908 had small lump in breast removed and abdomen opened, but nothing was removed. In 1908 had a four months' miccarriage. After miscarriage, began to suffer at menstrual periods, pain greatest in left inguinal region. In June, 1916 was removed to the Princeton Hospital and a D. & C. and an abdominal section performed. The patient was prepared for a vaginal and abdominal operation, and the following observations were made: The patient had no anus externally. Her labia majora were very rudiamentary, labia minora larger in proportion, vaginal orifice small and situated high up. The patient has no bony symphysis pubis, but instead has a cartilaginous band running from one pelvic bone to the other. It runs straight across and has no angle like a normal symphysis. It is about one-half inch broad, one-quarter inch thick, and about two inches long. About one-half inch above this cartilaginous band, there is a large oval scar, about the size of a silver dollar, that appears to be the umbilicus. On inserting the fingers in the vagina along the posterior wall for about three-quarters of an inch, an oblong opening is felt. On inserting the finger

in this opening, it is found to be the rectum. The vagina is found to be unusually short, being only about 2¼ inches long and about 2 inches wide. The cervix appears short, and is situated above the opening into the rectum. Upon vaginal examination two masses were felt in the abdomen connected at the lower end. The abdomen was then opened, and it was discovered that she had had a bifid uterus. The bladder was seen to be attached in front only by a few fibrous bands and was almost completely covered or surrounded by peritoneum. The left ovary was enlarged about the size of a turkey egg. The left tube and ovary were removed. Two small subperitoneal fibroid tumors were removed from the uterus.

Present disease: After suffering several hours, was admitted to the Princeton Hospital and diagnosis of full term pregnancy made. Last menstruation, February 22, 1917. After had been in labor about 12 hours, consented to Caesarean section. Vaginal examination made disclosed the cervix to be almost fully dilated. Bag of waters had ruptured soon after labor started. The uterus was delivered from the abdomen and walled off from the abdominal cavity by means of sterile towels and gauze and the conservative operation was performed. It was then discovered that some amniotic fluid had escaped into the right iliac fossa. It was thoroughly sponged out with saline sponges, and although infection was feared, the abdomen was closed without drainage. The mother did well until the third day, when she had a chill and temperature ran to 103, and pulse to 124, and she began to suffer with pain in her right side. On the third day after the chill, the stitches were removed in the lower angle of the wound and the incision teased open by a pair of hemostats, and a pocket of pus opened. The wound was enlarged and a rubber drain stuck in the opening and the abdominal wound left open. The mother ran a temperature for about three weeks and drained quite a quantity of pus. Her temperature then went to normal and she left the hospital in five weeks, in good condition. Mother and child are still living in good health.

Pelvic measurements show true conjugate of 7 cm.

Mrs. W. H., F., C., 21 years of age, weight 90 lbs., height 5 ft. Had usual diseases of childhood. Father and mother both living in good health.

Personal history: Never been sick since child.

Menstrual history, normal except irregular. Married September 29, 1916. Last menstruation September 1, 1916. Felt foetal movement about January 15, 1917. Constipated, appetite good, kidneys normal. Leucosyte count 10,500, red cells 5,200,000, and hemoglobin 80%. Present disease: On June 3, 1917, began with pains in abdomen and back. Pains gradually became harder and closer. Dr. Luck was called to see patient and diagnosis of full term pregnancy made, but as no progress was made, left and was called back in about eight hours. After being in labor aboue 24 hours and but slight propress made, she was removed to the Princeton Hospital. She was admitted at 9:00 A. M., June 4, 1917.

Pelvic measurements showed true conjugate of 7 cm.

Caesarean section advised and performed at 9:00 A. M., June 5, 1917, eight pound baby delivered, that had to be resuscitated.

Second operation: Became pregnant again in June, 1919. Began to have pain at 1:30 A. M., March 3, 1920, and was removed to Princeton Hospital at 6:00 A. M., and Caesarean section performed at 9:00 A. M., and delivered of an 8½ pound boy. At this operation some adhesions of intestine and omentum to the former uterine incision were found, but they were not dense and were easily broken up. At the urgent request of both the mother and father ,the mother's tubes were bisected in an endeavor to prevent future pregnancies. Mother and child left hospital on the 16th day and both children and mother are still living in good health.

History of Mrs. J. B. W.:—F., W., married, age 30, housewife, usual diseases of childhood, three other deliveries, labors normal, except first delivery instrumental, very nervous disposition, mentality poor, and teeth badly decayed, resembling Hutchison's teeth.

Menstrual history, normal. Didn"t remember date of quickening. Urinalysis, normal. B. P.: S. 140, D. 80. Blood count: Leucocytes 9600. hemoglobin 70%. Lymphatic glands enlarged in groin, cervical and epitrochlear region.

The writer was called to see patient on December 26, 1919, at 10:00 A. M., and found she had had a profuse hemorrhage from her vagina. Patient was pale, nervous, and pulse 110, temperature 97 4/5, and suffered no pain. Had had slight hemorrhage about two weeks before.

Examination of abdomen showed about 8½ months pregnancy. Foetal heart 150 and weak.

Vaginal examination: Cervix not dilated. considerable fibrous tissue and rigid, but could insert one finger in cervix and a doughy like mass felt. Examination increased the vaginal hemorrhage. Diagnosis of placenta previa made and patient advised that she should be removed to hospital at once. She refused. Hypo. of ¼ gr., morph. and 1/150 atr., given hypodermically. Hemorrhage soon ceased. At 4:00 P. M. was called back and found she had had another hemorrhage. Again advised hospital, again refused. Next day at 11:00 A. M. was called hurriedly and found she had had another profuse hemorrhage. She was then removed to the Princeton Hospital and put to bed, but still refused operative measures. This patient"s mentality was considerably below par, and it was hard to make her realize her condition. At her request that we try medicine, she was given coagulose hypo., and calcium chloride, by mouth, and foot of bed elevated.

This treatment was kept up for four days and during that time had no hemorrhage. On the evening of the fourth day, had another hemorrhage, and Caesarean section advised as being more likely to produce a live baby than a podalic version.

She was prepared as for an abdominal section, and baby removed, that had to be resuscitated. Placenta was extracted and cervix dilated from above and three pieces of gauze placed in it for drainage, and abdo-

men then closed in susal way. Time of operation 28 minutes. Baby and mother did well. Baby seemed to be all right, but died very suddenly on the eighth day. It was thought to be due to syphilis, because of mother's Hutchinson's teeth and enlarged glands. No Wasserman was made of the mother. The mother left hospital on the fifteenth day, in usual health. She has had no trouble since in anyway.

Pelvic measurements were normal.

History of M. P.—F., C., age 18, housewife, height 4 ft. 8¾ in., weight 88 lbs.

Family history: Mother died of puerperal fever. Father is in good health, except is ruptured, otherwise negative.

Personal history: Had usual diseases of childhood, no other diseases. Last menstruation July 16, 1919. Doesn't remember date of quickening. Is constipated. Kidneys act freely. Urinalysis, normal. Blood pressure, normal. Began to suffer pain April 24, 1920. About 9:00 A. M. was attended at home by Dr. Floyd C. Turner, and after being in labor 48 hours, was admitted to Princeton Hospital.

Examination disclosed cervix fully dilated, but no engagement of the head. Pains very hard and three minutes apart. Head seemed to be unable to engage.

Pelvic measurements showed true conjugate 6¾ cm.

Caesarean section advised and performed at 9:00 P. M., April 26, 1920, after being in labor 52 hours and no engagement of the head.

The conservation operation was done and nothing unusual was noted until the abdomen was opened, when we were surprised to find a considerable quantity of blood in the abdomen. On looking for the cause of the blood, we found a longitudinal slit in the uterus about one inch long, which proved a beginning rupture.

Both mother and child left the hospital on the 16th day and both are living today in good health.

Mrs. B. B. L., age 34, F., W., housewife, light brown hair, blue eyes, and fair complexion.

Diseases of childhood. Typhoid fever 10 years ago. Had three or four attacks of rheumatism, no other diseases.

Family history: Mother living in good health. Father died of typhoid fever, otherwise negative.

Personal history: Menstruation, normal. Married March 8, 1913. Had miscarriage in May, 1913. Missed period in November, 1913. Gave birth to full term boy August 11, 1914. Had very hard labor. In labor 36 hours and had instrumental delivery. In February, 1918, had a six weeks' miscarriage. Became pregnant again in November, 1919. Last menstruation November 4, 1919. Felt movement March 22, 1920.

In May, 1920, was called to see patient. Was complaining of "heart skipping beats" and dizziness. B. P: S. 150, D. 90. Heart showed mitral murmur beat 80 times to a minute, and very irregular. Face, hands, feet and abdomen swollen slightly. Urinalysis: Sp. gr. 1024, albumin negative, sugar present, acid. Several other evaminations of urine made, but no sugar found. Sugar found at first examination was thought to be due to some mistake

in collecting specimen. On June 25, 1920, had vaginal hemorrhage, moderate amount, lasted one day. On July 1, 1920, began to hemorrhage again, lasted irregularly 3 or 4 days, suffered some pain. Hemorrhage then ceased. On July 19, 1920, had another hemorrhage. Began to vomit early in morning and began to hemorrhage about noon. Hemorrhage severe. Examination made and diagnosis of placenta previa made and advised to go to hospital, refused. Continued to waste until July 24, 1920, when consented to Caesarean section and removed to the Princeton Hospital. Pulse became bad soon after entering hospital and was treated for heart until next morning at 9:00 A. M., when Caesarean section was performed. Placenta covered one-third of the cerviz.

Mother and child left hospital on the 18th day in usual health. Both living and in good health today.

Pelvic measurements, normal.

Mrs. T. P., F., W., 28 years of age, married December 20, 1916.

Family history: Father has heart trouble, mother has goitre and heart trouble, and is very nervous, one brother died of typhoid fever.

Personal history: Had usual diseases of childhood. Pneumonia when a child. Menstrual history, normal. Had miscarriage at six weeks, February 28, 1916. While carrying first child, born to her, had some condylomata removed from her labia minora. Kidneys act freely. Urinalysis, normal. Blood pressure, normal.

On July 31, 1918, one other child was born. On November 22, 1919, had another miscarriage at three months. Menstruated December 29, 1919. Missed period in January, 1920. On June 15, 1920, began to waste, wasted only a few hours, had no pain, moderate amount of flow. On September, 1920, began to waste at 9:00 P. M., wasted considerably, but only for a few hours. Stayed in bed two days and hemorrhage stopped. On October first, began to waste again at 7:00 P. M., moderate amount, no pain, wasted about two hours. On October 5, 1920, began to waste again about 8:00 P. M. Had very profuse hemorrhage and was removed to the Princeton Hospital. Examination revealed 8 months pregnancy. On vaginal examination, finger met mass that felt like placenta. Contiuued to waste until morning. Pulse went up gradually during night to 120. Caesarean section advised and performed at 9:00 A. M. October 6, 1920. The conservative operation was performed Mother and child made an uneventful recovery and left the hospital on the 14th day. Both mother and child are still living.

Pelvic measurements, normal.

Mrs. R. J. C.—Admitted to the Princeton Hospital June 11, 1920. Age 18 years, normal weight, 124 lbs., height 5 ft. 4 in., F., W.

Has had usual diseases of childhood. Menstrual history, normal.

Primipara. Last menstruation August 20, 1919. Says felt movement about January 13, 1920. Had very little trouble during pregnancy, except suffered some from constipation.

Urinalysis: Specific gravity 1016, albumin one plus, no sugar, acid re-

action, some hyaline casts. Blood pressure, normal.

When admitted, had been in hard labor for 36 hours, under the care of Dr. E. R. Logan, of Athens, W. Va. Three unsuccessful attempts had been made to do a podalic version at her home. She was then brought to the hospital. She was admitted with a temperature of 101, pulse 136, and respiration 22, and was having hard labor pains three minutes apart.

Physical examination: Head, throat, mouth, teeth, chest normal, heart rapid, 136 per minute, no murmurs, abdomen large, oval mass observed and palpated in abdomen that is diagnosed as full term pregnancy. Foetal heart 144 and strong. Child seems unusually large, ecpesially its head.

Vaginal examination: Cervix fully dilated, but head of child not engaged at superior strait. Bag of waters ruptured.

Pelvic measurements: True conjugate 8½ cm.

Moderately contracted pelvis.

We then had a very large child in a mother becoming exhausted, that was probably infected, and we had the choice between a high forceps operation, or a Caesarean section, or a podalic version. Pituitrin had been given her before she was started to the hospital, and as her pains were already VERY hard, we did not think it advisable to use any more of it.

The operations were explained to the parents, and they decided to have a Caesarean section performed. She was prepared for an abdominal operation, uterus then incised and child removed. Occipitofrontal diameter of child 14 cm., weight 11 lbs. We placed three large pieces of Iodoform gauze through the cervix for drainage, and sewed up the uterine wound very carefully, mopped out the abdomen thoroughly, and closed the abdomen. She ran a temperature for three days, going as high as 102, and pulse 120. At the end of 48 hours, iodoform packing removed, and on the third day, temperature and pulse went to normal, and mother and baby both left the hospital in two weeks in usual health. They are both living today, and the mother has had no discomfort since in any way.

PILO-NIDAL ABSCESS

Read before the West Virginia Medical Association, at Charleston, May, 1921, by C. S. Hoffman, M. D., F. A. C. S., Keyser, W. Va.

I a not here to talk to you about a new disease. I only want to call your attention to an old one about which the literature is very meager and which may be classed under different synonyms such as: Pilo-Nidal Cyst, Pilo-Nadal Abscess, Pilo-Nidal Sinus, or Fistula; and which may be, and probably is, often mistaken for Necrosis of the Sacrum, or Coccyx, or for Fistula in Ano, or Tuberculosis, or Syphilis.

It is a noticable feature in medicine how diseases often occur in groups. This is what happened to me and caused me to write this paper. I may have had cases of this disease prior to the year 1920, but if I did I treated them for something else and was not so forcibly impressed with the nautre of the trouble as I have been since.

February, 1920, A. S., male, aged

58, came to my office to consult me about an abscess in the region of the anus. He was a stout bodied, hard working man who had always enjoyed excellent health until a few months prior to his coming to see me. The beginning of his trouble was an abscess near the anus, which bursted and re-bursted and continuously discharged pus, keeping him sore, painful and uncomfortable in this region. When he consulted me there was an ugly, inflamed fistula tract discharging pus and extending from the verge of the anus to some distance up the back of the sacrum, with four or five blind fistulous tracts leading in different directions from the main fistula. My diagnosis was anal fistula of an aggravated nature. I advised operation. He entered the hospital February 16, 1920. The Hospital Record shows that the diagnosis when he entered was: "Fistula in Ano, with extensive sinuses extending back to Coccyx and up over left hip." At the operation all of these fistula tracts were laid open, sinous tissue dissected out, and while the opening led up to the anus I was surprised to find a mass of hair in the fistula tract, and how it got there, was, at that time, an unaccountable mystery to me.

March 12, 1920, W. R., male, aged 46, consulted me for a similar trouble. He was also a very stout, hard working, able bodied man, who had never suffered any trouble about his anal region until a few months previous, when an abscess developed and since that time, he has had sores about the anus with the discharge of pus. I advised an operation and he entered the Hospital March 15, 1920. The record there shows the diagnosis was: "Fistula in ano. Large fistulous tracts extending to Coccyx and well up onto right side of hip." The operation records show that: "All fistulous tracts were laid open into one. Quite a mass of hair was found in one tract." These fistulous tracts were dissected out, curreted and cauterized.

Some months later I was consulted by J. D., male, aged 38, for a condition similar to the other two cases, but of some years' duration. This fistula extended higher up on the sacrum and caused me to suspect necrosis of this bone. He had been operated on previously without benefit. He entered the Hospital October 4, 1920. His diagnosis after operation was a "Pilo-Nidal fistula over sacrum," and the operation record is "extensive fistulas posterior to anus, one containing quite a mass of hair."

In all three of these cases there were extensive fistulas, running in different directions, extending well up on the back of sacrum, giving the impression that there might be disease of the sacrum or coccyx. In not one could an opening be found leading into the rectum. All three contained a pocket of pus and hair. All got well, healing by granulation.

If I have other cases, after dissecting out the fistula tract, I will close them by suture unless some contra indication.

As to the pathology; every one of us who have attended at the birth of babies have noticed a dimple, or depression of the skin or sometimes an actual orifice present, in the socrococcygeal region. This is probably an infolding of the skin and this infolding of the skin is the original basis of the pathological process.

Where this dimple exists there may be an opening of greater or less extent, allowing for the escape of sebaceous and epithelial debri from the invaginated skin. Individuals may go through life and never be troubled with one of these cysts, but should infection take place and an abscess form, a fistula will probably result, or should this pinhole opening close without infection, a cyst will probably develope.

The treatment is as I have indicated. Thorough dissection of all diseased parts and the closure of the wound with interrupted silk sutures if no contra-indications, and the application of some heavy ointment to prevent, if possible, the soiling of the wound by the content of the bowel.

SOME MINOR POINTS OF MAJOR IMPORTANCE TO THE SURGEON

Read before Annual Meeting West Virginia Medical Association, Charleston, May, 1921, by Hugh G. Nicholson, M. D., Charleston, W. Va.

In selecting my subject it would probably have been wiser had I picked out some one of the many things that I propose to touch upon, as any one of them is of sufficient importance to justify a twenty-minutes paper and many of them to demand a book.

The man of twenty years experience will feel "I know all that, why didn't he write something new and original," but if I can save the man of less experience the heart pangs, grey hairs and loss of sleep that the omission of some of these things have caused me—then this paper is justified.

CONSENT.—Never operate on a patient without the consent of some one who has the authority to give it—if a wife, the husband; if a minor, that of the father or the guardian. Then after consent has been secured, stay within the scope allowed; but better beforehand try and get permission to do all that may be indicated.

HOSPITAL.—Do not undertake any work, no matter how minor it may seem to you, in your office or the private home. Most of us have modern hospital advantages available, and we are doing an injustice to the patient and to ourselves to undertake anything elsewhere. Well do I recall a case in which I was called to finish an incomplete abortion that had been attempted. It later developed that automobile pliers had been used by the patient herself. I started my work on the kitchen table and began to pull on what seemed to be the umbilical cord. After I had drawn out several inches of it, I realized that I had a piece of the intestine. An ambulance was called and the patient rushed to the huspital. Most of the sigmoid had to be removed and the Mayo operation of transplanting the descending colon into the rectum was done. Since that lesson I had rather do a circumcision in the hospital and allow them an operating room fee and get less myself. It is hard to say what is mionr and what is major surgery anyway. What you thought to be minor might be followed by hours of shock, and if it were in your office, you would be very uncomfortable.

ANAESTHETIC.—Always if possible examine the urine, heart and

lungs the day before. Any agent that so nearly suspends life as to allow any amount of cutting without pain is dangerous. Do not tell your patient there is no danger, although you should have them in as optomistic mood as possible. Be very careful about making promisese of a cure. You may remove something abnormal, and yet leave the real pathology behind for some competitor. He may not treat you after the tenents of the golden rule.

ACIDOSIS.—Its mention is sufficient. Its prevention is simple. Alkalinize your patient with Kalak Water if you like; but you can do the same thing with Bicarbonate of Soda 20 grains every four hours, given for 48 hours preceding the operation. Do this and you will have little nauseu, much less pain and much more comfortable convalescence.

ASEPSIS.—Be as clean as we may and many thousands of bacteria will be introduced into the wound. Infection will be practically eliminated if the parts are gently handled. The natural surgeon can do much without the use of retractors. Stop all hemorrhage before closing and co-aptate the edges carefully. A few interrupted fine, plain catgut sutures in the fat tied loosely in everything down to the deeper parts are fine for controlling oozing that may develope after the heart's' action recuperates from the anaesthetic; then if vomiting does occur you feel much safer. I have heard of a patient in which they were not used spilling all the intestines through the abdominal incision.

INCISION.—I once heard a surgeon of national prominence lecture on the inch incision in appendectomy. He spoke of the small danger of hernia following, and his absence of hemorrhage. He operated for us through his short incision, severing the deep epigastric artery. Naturally he had trouble lengthening the incision and in controlling the bleeding. Do not think from this that I advocate a long incision; but if proper care is used in closing, the danger of hernia is practically nil, and much better work can be done through a rather liberal opening.

ABDOMINAL PADS.—You cannot always get on without them, but the fewer used the fewer adhesions to follow the operation. If used do not fail to properly anchor, as such a thing has been done as to leave them in the abdomen. I have been guilty through a mistake of the nurse, but had a hemostat or ring been on the tape, I would not have left it in.

ASPIRATION.—Do not aspirate any fluid collection from the abdomen without first catherizing the bladder. The reason is obvious. When aspirating any fluid do not remove too rapidly, as there is danger of shock.

ABSCESS.—In opening remember your incision should radiate in those pointing near the nipple or near the anus. They should be longitudinal in the hand, in the perineum or on the vertex. On the neck or face they should run parallel to the folds and with the wrinkles.

BLOWS ON THE ABDOMEN.—If as hard as the kick of a horse open early and inspect. If in doubt do not wait to find out the gravity, inspect. I remember two cases that would probably have recovered had they been operated on early; their death

being directly due to ultra-conservatism.

AMPUTATIONS.—Nothing is more difficult to do correctly. Much suffering can be saved if the stump is correct. Do not have any scars where they rub on the socket of the artificial limb. Also remember the possibility of adapting certain tendons of flexion and extension to artificial members. Also in growing persons remember that the bone grows more rapidly than the muscular tissue. I have had to do secondary amputation to correct bony projections an inch or mare beyond the main stump and covered with the skin alone.

SUTURES.—No detail is of more importance in your work, than the use of the right thing in the right place. In closing wounds I believe in tier suturing, and for the materials to use I refer you to the following list based on careful investigation and experience, and while by no means submitted as absolute is sufficiently accurate to provide a very valuable working basis:

Striated Muscle, No. 1 or No. 2, 10 or 20 days, Chromic Catgut.

Fascia, No. 0, 20 days, Chromic Catgut.

Skin, Horsehair or No. 0, Plain Catgut.

Peritoneum, alone No. 0, 20 days, Chromic Catgut.

Vagina, No. 2, 40 days, Chromic Catgut.

Rectum, No. 2, 40 days, Chromic Catgut.

Kidney, No. 2, 40 days, Chromic Catgut.

Uterus, No. 2, 40 days, Chromic Catgut.

Stomach and Intestines, No. 1, 40 days, Chromic Catgut.

Cervix, reinforced by silk or linen, Special Cervical Suture or 40 day Chromic Catgut.

Perineum, immediate repair, silk worm gut, not too tight.

Perineum, secondary, 30 day Chromic Catgut, reinforced with silk worm gut.

Ligations, large Arteries as Uterine and Ovarian, No. 2, 20 days, Chromic Catgut.

A special case calling for this study was a post operative hemorrhage in an appendectomy in which the stump was ligated with No. 1 plain catgut. Upon inquiry I find all makers of catgut advise No. 1 and No. 2 Chromic Catgut for this purpose.

The skin being an ideal culture medium, I think to use an absorbable suture is poor technique. For years I have used horsehair for this purpose and have no cause to regret it. In doing the round ligament operations and in closing the vaginal vault in hysterectomy it is well to reinforce the suspensory part with about two linen sutures. I have had the vagina prolapse and the uterus again become misplaced owing to the lack of them. In trachelorrhaphy use not less than a thirty day No. 2 Chromic Catgut. If you think you are getting results in this operation and you are using anything less resisting, examine your patients at the end of two weeks and see how many failures you are getting.

While writing this part of this paper a woman dropped into my office who came to me the latter part of last December for vaginal bleeding. A competent surgeon had amputated her cervix four weeks earlier using plain catgut for sutures. Next day

she began bleeding and did so daily until she came to see me. She was much exsanguinated, the cervix had not healed, no section had been made from the tissue removed, and I had to consider malignancy in my work. I removed the body of the uterus and tied off the uterines with a double strand of No. 2 Chromic Catgut, 20 day. On the eighth day she again began to bleed, indicating the absorption of the catgut, and also showing that the blood vessel does not always become occluded in 48 hours. I had to transfuse with human blood before this hemorrhage was under control.

CONCLUSIONS.—No machine is perfect in its running if there is a defective part anywhere in its make-up. No surgeon is perfect at best, but his work will be much better if he is careful as to each little detail, no matter how insignificant it may seem.

TRANS-DUODENAL BILIARY DRAINAGE

Read before the West Virginia Medical Association at Forty-fourth Annual Session, Charleston, May, 1921, by Thomas P. Sprunt, M. D., Baltimore, Md.

The diagnosis of a typical case of cholelithiasis with paroxysms of excruciating pain in the right upper quadrant of the abdomen and with jaundice may sometimes be made readily from the anamnesis alone. When such attacks recur, the patient usually seeks surgical relief and no physician would hesitate to advise it. However, most instances of biliary tract disease are not accompanied by such characteristic features, all our diagnostic methods may not be adequate, and many cases simulating gall bladder disturbances are not benefitted but may be made worse by surgical exploration. We must admit that the methods heretofore relied upon, a careful history of the case, the physical examination, tests of the gastric content and of the stools, roentgenography of the gall bladder region and of the gastro-intestinal tract after barium meals, combined with a general study of other systems of the body, are but indirect methods of investigating the gall bladder, ducts, and duodenum and we must sometimes be content to limit our diagnosis to that of a lesion of the right upper quadrant or even merely to suspect a lesion in this region, which is so rich in pathological possibilities, hence, the announcement of a method, by which the bile from the common duct, from the gall bladder and that freshly secreted and from the hepatic ducts may without surgery be isolated and separately studied both qualitatively and quantitatively, has excited wide spread interest. So novel is this idea at first that many of us with conservative tendencies are apt to be quite skeptical and properly so until the method has been thoroughly tested.

A brief anatomical, physiological and pathological review may be helpful in making clear the rationale of this procedure. Situated between the liver and the entrance of its duct into the duodenum is the pear-shaped gall bladder, a thin walled elastic, muscular organ lined by mucous membrane and with a normal capacity of aboue 60 to 100 cc. Connecting the gall bladder with the hepatic duct

is the cystic duct with its valves. The bile passage from this junction of hepatic and cystic ducts to the duodenum is known as the common duct and at its duodenal end there is a muscular sphincter spoken of as Oddi's sphincter. The liver is more or less constantly active in the formation of bile, which passes down the ducts to enter the duodenum if the sphincter of Oddi is open or is dammed back into the gall bladder if the sphincter is closed. The biliary system is analagous to the urinary system, in many respects differing in this important particular, that the release of urinary sphincter control and the passage of urine is largely voluntary while the entrance of bile into the duodenum is entirely beyond our voluntary control and under the influence of the autonomic nervous system. Physiologists have shown that the expulsion through the pylorus of acid chyme containing proteoses and albumoses is attnded by an opening of the bile duct and an outpouring of bile into the doudenum.

The presence in the duodenum of a chyme rich in carbohydrates especially is associated with an opening of the sphincter, a relatively small bile outflow, and a larger flow of pancreatic secretions. In 1917, in connection with a study of the physiology of the neuro-muscular reflexes of the alimentary tract, Meltzer announced his theory of contrary innervation based on the presence of both sphincters and in the contractile organs proximal to them and on the motor and inhibitory nerve fibres in simultaneous inhibition of sphincters and motor activity of contractile organs or contraction of sphincter and inhibition of activity on the part of the contractile body. He noted that in animals certain substances in the duodenum produced marked relaxation of the duodenal walls locally and relaxation of Oddi"s sphincter and among these substances was magnesium sulphate, provided the solution of this salt was placed directly in contact with the duodenal mucosa without first passing through the stomach.

Immediately following the publication of this purely physiological paper by Meltzer, Lyon proceeded to test out in patients the possibilities of this method. It was found that, on injecting various strengths of magnesium sulphate solution into the fasting duodenum through the duodenal tube, even though the solution were in large part immediately withdrawn, within from one to six minutes bile began to flow from the ducts into the duodenum and out through the tube. In normal cases it was noted further that the first bile to appear was of a light golden yellow color. After from 10 to 30 cc. of this first bile had been withdrawn, the color of the bile suddenly changed to a considerably darker golden yellow and the viscosity of the bile also increased. The flow of this type of bile was sometimes steady, sometimes slightly intermittent, and from 30 to 100 cc. or slightly more could be obtained before the color changed again suddenly to a light lemon yellow and the bile became much less viscid, distinctly thinner and more limpid than either of the other types. The amount of this last type varied from a few cc. to several ounces and seemed to flow quite intermittently as long as the sphincter remained open.

As Lyon remarks, there should be

little argument as to the source of the first bile obtained for obviously the first source of supply is from that lying in the ducts and especially the common duct. The question at once arose as to the source of the darker, more concentrated bile and the acceptance of his belief that it came from the gall bladder was based on the following factors: (1) The color and viscosity indicate a higher concentration and suggest at once that it had been stored for a time in some storage chamber. (2) In diseased states of the gall bladder this fraction is found definitely abnormal and resembling that found in the gall bladder and familiar to surgeons in operations on such cases. (3) The gall bladder is the most probable source of any bile in such amounts which is obviously not freshly secreted. The common and hepatic ducts measuring in total length about 8¼ inches with an average diameter of one-fourth inch can scarcely hold as much as 90 to 100 or 150 cc. long enough to show change in color and viscosity. (4) In patients, whose gall bladders have been removed and who are studied by this method after operation, the second darker, more viscid type of bile is not recovered. The first light golden yellow bile passes immediately into the light lemon yellow bile whose intermittent flow continues and can be collected during long periods. (5) The appearance of the gall bladder bile can be placed on a satisfactory physiological basis by assuming the truth of Meltzer's theory of contrary innervation and accepting the view that the stimulus of the magnesium sulphate simultaneously relaxes the common duct sphincter and produces contraction of the gall bladder musculature, thus furnishing the vis a tergo for the outpouring of the bile into the duodenum.

Let us revert for a moment to a brief consideration of certain phases of the pathology of the biliary tract. The gall bladder and the bile ducts are subject to infection from several different sources. (1) From the liver by the excretion into the bile of organisms brought to the liver through the portal vein and from infections within the liver itself. (2) Through the blood stream directedly to the walls of the gall bladder or ducts from foci of infection elsewhere in the body. (3) Ascending infections from the intestinal tract by way of the duodenum and the common duct. In this system as in the urinary tract and elsewhere, infection is fostered by stasis or lack of the normal free drainage. Infection of the gall bladder and bile passages, in its turn, by weakening the muscular contractions, by rendering the bile more viscid by the outpouring of mucus and by plugging of ducts or orifices predisposes to biliary stasis and a vicious circle is formed. The factors of chief importance in the formation of gall stones are infection and stasis with concentration of the bile and the crystalline precipitation of certain of its constituents. A hypercholesterinaemia and a diminution of bile salts may be added factors. The lesions most commonly found in association with and bearing probably some etiological relationship to carcinoma of the gall bladder are cholelithiasis and chronic cholecystitis. This sequence of the most important lesions of the biliary tract is the basis of Lyon's' plea for the EARLY

diagnosis of biliary disease by this method and for the early institution of this so-called medical drainage of the gallbladder and ducts in the hope of avoiding the later and more serious sequelae.

The method is time consuming and necessitates meticulous care in its many details. This will be an objection to it on the part of both physicians and patients and further experience is necessary to show whether the test will have a widespread usefulness or be restricted to well-organized laboratories where many such examinations are being constantly made and these difficulties in part obviated.

The physiology of the gastrointestinal tract varies, of course, according to the stage of digestion, and in order to secure uniform conditions and to avoid admixture as far as possible with gastric, duonenal and pancreatic secretions, the patient is taken for this test in the early forenoon after a fast of from 12 to 15 hours.

The teeth are carefully brushed, the mouth thoroughly rinsed and the sterile duodenal tube allowed to pass into the stomach. Any of the various tubes may be employed. The Rehfuss tube facilitates lavage but the Jutte tube has the great advantage of being more easily being passed into the stomach and of slipping through the pylorus much more quickly. When the end of the tube is in the stomach, the fasting contents are aspirated and set aside for examination. The stomach is then thoroughly lavaged until the water comes out quite clear. Lyon then makes use of a zinc chlorid solution as an astringent, which he says squeezes material from the ducts and crevices of the mucosa, and again washes the stomach with water. The patient then turns on his right side, swallows a little more of the tube and in a variable length of time from a few minutes to one hour the tube tip passes through the pylorus into the duodenum. Under normal conditions, it is maintained, there is no bile present in the duodenum in the fasting state. The duodenal contents are aspirated and placed in a separate receptacle. A warm 25% solution of magnesium sulphate, about 30 cc., is then injected into the dudenum and withdrawn immediately or after one or two minutes. The first portion usually comes away clear and then bile tinged material appears. A piece of glass tubing is inserted near the proximal end of the duodenal tube and through this window the color and general appearance of the bile are noted. The first fraction, that from the common duct is termed "A" bile, the second, darker, more viscid fraction from the gall bladder is called "B" bile and the third light limpid portion, "C" bile. The separation into these fractions cannot, of course, be made with absolute sharpness but often with surprising accuracy. The vessels into which the materials are placed should be sterile and the examinations should be made as soon as possible.

Cultures are made from the stomach contents, duodenal material and from the three bile fractions. In the gross appearance, notes are made of the quantity, color, clearness or cloudiness, presence of flocculi, viscosity, etc.; of chemical reactions, acidity or alkalinity, specific gravity, tests for occult blood, effervescence with hydrochloric acid (for a sugges-

tion as to the presence of excess carbonates) and perhaps also for urobilin, urobilinogen, trypsin, etc.

Microscopically, the important elements are mucus, desquamated epithelial cells, bile strained or unstrained, white blood cells or pus cells, red blood cells, bacteria, crystals and particles suggestive of an origin in stomach or mouth, as food residues, muscle fibres, starch granules, myelin droplets, etc.

Careful mention of the findings in the various portions, a correlation of these findings, and conservative interpretation may give important data for inferential diagnosis of conditions in the various parts of the biliary tract and of the duodenum. One must never lose sight of the fact that there is some admixture of duodenal contents with the bile fractions and sometimes of course an admixture also of gastric material. Indeed, in cases of hyperacidity this may be a very disturbing factor,, the frequent gushes of very acid chyme making the bile cloudy and changing its color to such an extent that the separation into the various fractions may be impossible. Again, in cases of gastric anacidity, the bacterial flora may be excessive and heavy growth obtained in all cultures. However, even under such conditions, sterile bile has been obtained from gall bladders, a fact which is encouraging to those who are inclined to stress the bacteriological features of the general procedure. As a rule with normal gastric acidity and after a fast of 15 hours, it is not uncommon to find all cultures sterile or the duodenal contents may show a few colonies. If the duodenal and "A" bile cultures are sterile or show only a few colonies and the "B" bile is swarming with bacteria, it is reasonable to assume that the bacteria were in the gall bladder.

In drawing inferences as to the state of the gall bladder, the amount of the "B" bile, its color, consistency and the time of its appearance are factors which have been emphasized. Amounts of over 150 cc. of "B" bile of very dark color and of increased consistency are supposedly indicative of an atonic condition with some dilatation of the gall bladder and stasis of the bile whether or not there are indications of infection. Stasis predisposes to infection and to the formation of calculi. If in addition to data suggestive of stasis, we find many more or less degenerated pus cells and desquammated bile stained epithelial cells with or without bacteria in the "B" bile and an absence of these elements in other fractions, we may infer with reasonable accuracy the presence of a cholecystitis. Similarly, indications may point toward an infection of any other portion of the region under examination. The presence of many crystals, of gall sand or even of very small concretions in static bile is strongly suggestive of the presence of gall stones.

In the time at my disposal I can give only a very inadequate idea of the possibilities claimed for this method by its most enthusiastic advocates, especially B. B. Vincent Lyon and Smithies. On patients from the clinic of Dr. L. F. Barker, approximately a hundred of these tests have been made in the laboratories of Drs. Baetjer & Miller or the Drs.

Clough and of Dr. Hodge, to whom the patients were referred for laboratory work. They will probably report their observations in detail when sufficient data have accumulated. It has seemed wise to aid in calling attention to the method and to secure for it a thorough trial. We have come to regard it as of very definite value when used as an adjunct to other methods of diagnosis, realizing the necessity of careful correlation of all the findings and conservatism in interpretation.

As a result of this test in certain cases of the exact operative findings in gall bladder and ducts may be predicted, as when large amounts of almost pure pus are obtained from an empyema of the gall bladder (we have had no such case in our series) or when small concretions are found in a thick, tarry "B" bile. In many other instances, although the test will indicate a pathological condition of the biliary tract, the exact nature and extent of the lesion will not be shown. For instance, the possible variations in cholelthiasis may depend, among other factors, upon whether or not there is obstruction of the systic duct. If the duct is obstructed, no B. bile will be obtained. If the duct is patent and if the gall bladder is not conpletely filled with stones and has some contractile power left, a vanable amount of abnormal B. bile may be recovered. This may or may not show more direct evidence of infection or of concretions depending upon the stage of th inflammatory process at the time of the test.

These points may be illustrated by a few cases brefly presented.

1. No. 706′, man, 56 yrs., gave a typical history of three attacks of gall stone colic, the 2nd and 3rd attacks with jaundice. He was seen two weeks after the third attack when he showed jaundice, a large liver, a rather tense abdomen but no tenderness, no gall stone shadows in X-Ray examination, caecal stasis after barium meals and gastric acidity 30 to 50. The bile drainage test made by Dr. S. R. Miller may be summarized as follows: Fasting gastric contents normal, no duodenal contents recovered. The patient was given two stimulations of the ordinary strengths of magnesium sulphate but during the period of study the bile recovered was consistently of the C. bile type coming with characteristic intermittence and amounting in all to 135 cc. No true B. bile was secured, leading to the interpretation of some obstruction in the cystic duct, making gall bladder discharge impossible. A letter from the patient's physician some time later stated that after a fourth attack an operation was performed and 53 stones were removed. Their exact location was not mentioned.

II. No. 7264, man, aged 55, complained chiefly of arthitis. Owing to the history of occasional acute attacks of indigestion with epigastric pain in the intervals, flatulence with tendency to diarrhoea, and with a view to the location of infectious foci, a gall bladder test was requested and was carried out by Dr. Clough. The complete report is given here as an example of the detailed report most useful to the physician who refers the patient to the laboratory.

"The Jutte tube was passed easily without any water. It entered the duodenum within a half hour. With

the discharge of B bile after the sulphate there was nausea complained of, but no pain.

Fasting stomach contents.—

Volume 50 cc (No water since night before).

Opalescent fluid containing a large amount of mucus.

Slightly alkaline to litmus.

HC1 deficit 16 acid. per cent.

Total acid, 2 acid. per cent.

Lactic, 0.

Blood, 0.

Guaiac, 0.

Micros: Thin strands of mucus containing many squamous epithelial cells, some round epithelial cells and moderate number of pus cells. No food.

Culture: abundant growth.

The gastric washings were free from bile, but material subsequently aspirated from the stomach contained bile.

Duodenal contents:

Viscid slightly cloudy fluid, pale yellow, containing a moderate amount of thin mucus and flocculi.

Reaction alkaline to litmus.

Micros: Some squamous epithelial cells, much granular debris; bacteria; no pus cells.

Culture: Abundant growth.

The sulphate solution was nearly all recovered 10 minutes after the injection, when bile began to flow.

A bile (?).

The first fluid recovered was pale yellow, viscid, similar in appearance to the duodenal contents. Consisted largely of sulphate solution.

Vol. 20 cc.

Sp. Gr. 1.05 .

Alkaline to litmus.

Micros: A few flocculi of mucus containing granular disintegrating epithelial cells, moderate number of cleared pus cells, bacteria, and much granular debris.

Culture: Abundant growth.

B. bile.

Volume, 115 cc.

Deep brownish golden yellow color, very viscid, nearly clear, with a slight opalescence; small amount of mucus and small flocculi.

Reaction alkaline to litmus.

Sp. Gr. 1.018.

HC1, no gas formation.

Micros: The sediment after centrifugalization was scanty, consisting of thin mucus flecks containing much granular debris, a few bile stained granular epithelial cells, and a few small cholesterin and fatty acid crystals. No pus cells seen. Many bacteria in fresh and stained films.

Culture: Abundant growth. The culture (18 hours) seems relatively pure, and shows many opaque white viscid colonies of a Gram negative small bacillus morphologically resembling the colon baccillus.

C. bile.

Volume, 65 cc, and was flowing freely when test was terminated.

Light golden yellow color, darker and a more intense yellow than the usual C bile. It was much paler than the B bile.

Reaction alkaline to litimus.

Micros: A few granular epithelial cells, much granular debris, many bacteria, no recognizable pus cells. No crystals.

Culture: Abundant growth.

Comment: The fasting stomach contents were a little excessive, but no food retention. There was completenacidity, a condition which probably explains in part at least the abundant growth in cultures.

The duodenal contents, and probably the last of the stomach contents contained bile, and there was no definite A bile fraction obtained.

The B bile is somewhat darker than normal, and the volume is abnormally large. This definitely suggests some stasis.

There was a moderate amount of mucus and flocculi. The number of recognizable cells was much smaller than in the duodenal contents, there was no pus, or other abnormal elements except the bacteria.

We wish to reserve judgment as to the significance of the bacteria until they can be adequately studied. It seems quite possible, however, that they may be colon bacilli regurgitated from below.

The findings suggest gall bladder stasis, and possibly a slight chronic inflammatory process, but would seem to rule out an inflammatory process of any appreciable activity.

In the course of an operation for the repair of a right inguinal hernia and removal of a chronic appendix, the surgeon was requested to explore the gall bladder . He did so and the gall bladder was found greatly dilated, its walls whitened and thickened and its cavity filled with a great number of stones. The cystic duct was quite small and it seemed evident that no stones had passed into or through it. The common duct was normal.

III. No. 7195, man, aged 36 yrs. The diagnosis of this case was: (1) Chronic infections arthritis. (2) Chronic mastoiditis and chronic tonsillitis. (3) Chronic appendicitis (?) with caecal and ileal stasis, evidence of right sided abdominal adhesions and history of abdominal attacks.

The gall bladder examination in this case, also performed by Dr. Clough, showed again evidence of stasis in the intensely dark color of the B bile, which, however, was obtained in normal amount, 60 cc. The transition from the very dark B bile to the pale C bile was more gradual than usual. His comment follows:

"The B bile was (practically) sterile. This fact and the absence of pus and other inflammatory elements would indicate that there is no very active inflammation present. The intensely dark color would suggest stasis in the gall bladder possibly associated with a chronic but not active inflammatory process."

The patient was sent into a hospital for eradication of infectious foci and treatment of the arthritis. At operation, a subacute appendix was removed. The gall bladder was found to be soft, contained no stones and was easily emptied. There was a slight constriction about the fundus, entending longitudinally, giving an hour-glass contraction. Near the goose neck there was a band of dense, fibrous adhesions which was severed.

IV. No. 7199, a woman, 34 years of age. In this case, the test was distinctly helpful in diagnosis. Her chief complaints were of flatulence, general abdominal distress with soreness in the right upper quadrant and occasionally mucous colitis. Two severe acute attacks of arthritis had occurred during the past year and the tonsils had been treated with the X-Ray.

There were definite psychoneurotic elements in the case which the patient freely recognized. The abdominal symptoms had begun while she was under unusually severe mental and

physical strain. On examination there were found tenderness in both right upper and right lower quadrants, a gastric hypoacidity, and no very characteristic features on X-Ray examination. The comment from the laboratory on the bile examination was as follows: "The B bile was darker than normal, but in normal amounts. It was more cloudy than normal, due to the numerous crystals present. These were extraordinarily numerous, and some looked like minute gall stones. There was a striking absence of pus and epithelial cells, notwithstanding their presence in considerable numbers in the stomach.

The pain during the discharge of B bile was an interesting feature. The cultures were sterile. The findings suggest a chronic inflammatory condition."

At operation, the chronic appendix and the gall bladder were removed. The gall bladder contained a large number of fine, whitish, mulberry-like stones with dark green muddy bile. There was moderate thickening of tis walls and moderate stenosis of the cystic duct.

About five weeks after the operation, another duodenal intubation was done and the bile examined. No B bile was obtained and the bile recovered was normal on gross and microscopic examination and contained no significant bacteria on culture. As usual after operations on the gall bladder, the duct sphincter was relaxed and bile present in the fasting duodenal contents.

The foregoing cases have been cited as instances of positive findings in chronic cases. The test has been found distinctly helpful, also, as negative evidence, in patients with perfectly normal bile, but presenting certain features often associated with biliary disease, flatulence, abdominal distress, spasticity of colon and mucous colitis. Such a test is particularly useful in psychoneurotic individuals whose attention is centered upon their abdominal symptoms and who may have either a fear or a conviction of gall bladder lisease.

We have not thus far used this method to any great extent as therapy. A number of the patients with evidence of biliary stasis have felt much improved after a few treatments.

Lyon has reported remarkably good results in a variety of cases types and Smithies is enthusiastic over its usefulness. In a series of cases of acute catarrhal jaundice, the former reports a reduction in the duration of the disease from an average of 35 days in those cases treated by the old methods to an average of 17 days in the patients whose bile tracts were drained by his method. They do not by any means claim to replace surgery of the biliary system but Lyon emphasizes the possibility of preventing some of the late surgical diseases by medical drainage during the period of vague dyspeptic symptoms before there have occurred lesions and symptoms sufficiently serious to warrant surgical interference. In view of the many cases of latent gall stones, this possibility would seem to be distinctly limited.

Other fields of usefulness pointed out are: (1) The drainage of infected bile ducts after operations on the gall bladder where surgical drainage has not continued long enough; (2) The drainage of badly infected gall bladders in patients who would

be very poor operative risks or who refuse operation; (3) certain cases showing marked digestive upsets, the so-called "biliousness," in association with migraine. A precaution suggested after the drainage of badly infected material is to lavage the duodenum thoroughly, then give through the tube a large amount of water or an ounce of castor oil in order to flush out quickly all infective or toxic material derived from the biliary tract and remaining in the intestine.

Further observation by more workers is needed to establish the therapeutic value of this method. It may be noted that after an ordinary meal in the normal process of digestion, a certain amount of "medical drainage" of the bile passages occurs. We do not yet know the relative strength and efficiency of the stimulus furnished by magnesium sulphate given through the duodenal tube and that of a heavy protein meal ingested in the usual manner.

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ANESTHESIA BY ORAL INSUFFLATION IN TONSILLECTOMY

By Dr. L. D. Norris, Fleming Building, Fairmont, W. Va

In looking back over the days when we were medical students most of us can remember quite well when anesthesia for removal of tonsils consisted in putting the patient deeply under with drop ether, proceeding hurriedly to operate until the reflexes returned, then stopping the operation to reanesthetize perhaps once or several times. The patient during this uneven anesthesia gagging, coughing and vomiting, swallowing and aspirating back into the trachea the blood and mucus that the surgeon could not sponge out with gauze. I have no doubt but that a certain number of operators still employ this method to the exclusion of any newer methods which tend to improve anesthesia in surgery of the throat.

Tonsillectomy is not considered the trivial operation today that it appeared to us fifteen or twenty years ago. We are no longer satisfied in snipping off the tops of tonsils, but aim to remove the tonsil and capsule in entirety without injury to the pillars and to arrest hemorrhage before the patient leaves the operating table. To properly do this it is not only necessary that the operative field be as dry as possible, but that the anesthesia be maintained until the conclusion of the operation. The surgeon should not have to hurry, but be able to take his time and see that every detail is attended to.

Oral insufflation consists of blowing the anesthetic vapors into the pa-

tient's mouth, and while not practicable to attempt to induce anesthesia by this method, it is possible after the patient has been carried to the surgical stage by the usual methods to satisfactorily maintain the required stage by insufflation as long as the operator desires.

A number of apparati are now manufactured for the insufflation of anesthetic vapors, an example of which is the inexpensive and practical ether in a bottle, the vaporized ether carried through several feet of rubber tubing to a mouth hook and into the mouth. The patient breathing this vapor, the strength of which may be regulated by a valve on the ether bottle shutting down or increasing the amount of air passing through the ether. Another more expensive but very effective machine is the Connell Insufflation Apparatus where the lipuid ether is dropped from a compartment into a vaporizing chamber containing gauze lightly packed through which air is forced, carrying the ether vapor to the patient's mouth through rubber tubing. In this type of machine the ether control and the air volume control are separate, which is an advantage in the different types of cases we encounter. I merely mention these machines as types, there being other good ones on the market.

In most machines where air is bubbled through ether we give the patient a small volume of very concentrated ether and depend upon the mixture of atmospheric air to both dilute this and supply the total volume necessary. Where the air control and ether control are separate we may supply to the patient a mixture of ether and air of sufficient volume to meet all his respiratory needs. This volume ranges from twelve to eighteen liters a minute. While this latter method is more wasteful of ether it enables us to use a larger volume of lower concentration, and therefore, in this respect is an advantage.

Incorporated in most of these machines is a suction device whereby the blood and mucus may be aspirated from the throat and trapped in a receiving bottle. A good bit depends on the surgeon and the method he employs for removing tonsils as to whether suction is desirable or not. I have worked with surgeons who dissected the tonsil out, clamped off all bleeding points at the time, swabbed out the small amount of blood with gauze sponges, and really got along very well without the aid of suction, but in the majority of cases where the snare method is used and hemorrhage taken care of after the tonsil was removed it is not only a great help but very necessary in order to preserve a dry field and prevent the patient aspirating the blood back into the trachea.

In my own experience the apparatus that has proved most satisfactory is the Gwathmey Nitrous Oxid-Oxygen Apparatus, with the double ether bottle attachment, in one of which I put anesthol and the other ether. Instead of atmospheric air I use nitrous oxid and oxygen, allowing these gases to bubble through either the anesthol or ether or both. Anesthol is a mixture, holding in stable chemical union 35.89% of chloroform, 17% of ethyl chloride, and 47.10% of ether, with a boiling point of 104 fahrenheit. It is just as efficient as chloroform and the

ether content counteracts the depressing effect of the chloroform in the mixture, which together with the advantage of volatilizing slightly above the temperature of the body so that its elimination is properly regulated by the lungs, making it safer than straight chloroform, indeed I prefer anesthol to chloroform, and employ it chiefly for induction of anesthesia, relying on ether for maintenance. Since it is far less irritating to the lungs I sometimes use it throughout the entire operation in cases where there is any likelihood of the patient contracting an anesthetic pneumonia. Attached to this apparatus is an electrical warming device through which the vapors pass before being delivered to the patient. Authorities differ as to the value of warming anesthetic vapors; the theory is of course good, but some claim that by the time the vapors pass through several feet of tubing they reach the patient at approximately room temperature. Taking into consideration the excellent results I have obtained with warmed vapors I must admit that I am loath to discard the warmer.

Since the majority of patients about to have their tonsils removed are children it behooves us first to do all in our power to allay the alarm most of these little patients are prone to develop. Gentleness and kindness is never so sorely needed as in the trying moments just prior to the actual operation. Go into the room with a smile and make friends with Billy if that is his name—don't fail to call him by name—ask him what he wants for Christmas, who his best girl is and try to get his mind off the operation. This does not work with all youngsters, but it helps considerably in most cases. Billy or Jane will get to like you and have some confidence in you before you reach the operating room and that means so much.

To start a little patient with the drop method of ether means a fight on our hands from the very beginning, since most of them resent it from the first drop, and ether with its disagreeable odor and its long induction stage means a very uncomfortable few minutes for the patient, the onlookers and the anesthetist. Chloroform by the drop would be pleasanter, quicker and more efficient to start with, but far more dangerous and to my way of thinking bad practice when we have even pleasanter, more efficient and safer methods at our disposal.

With the Gwathmey method ether is not used by the drop method at any stage of the anesthetic. The patient is anesthetized in the operating room on the operating table. A special constructed vapor mask about twice the size of the ordinary mask with a connection for rubber tubing is used. This is covered with several layers of gauze upon which is placed a few drops of oil of bitter orange, then partly surrounded with a towel, the rubber tubing from the machine connected, and nitrous oxid 80% and oxygen 20% allowed to flow to the mask. In about thirty seconds the little patient begins to get drowsy and smells nothing but the delightful odor of orange. At this point just a little of the gas is allowed to bubble through the anesthol, so little that masked as it is by the orange odor it is barely perceptable to the patient who becomes unconscious in from one

minute to a minute and a half, usually without excitement or struggling At about this point the nitrous oxid is decreased to about 60% and oxygen increased to about 40% and the anesthol increased. This is continued until breathing becomes regular and the patient is thoroughly asleep when the anesthol is shut off and the ether substituted. Usually in from three to five minutes after the anesthetic has been started the patient is ready for operation. The tubing is disconnected from the face mask and the mouth hook attached; at the same time the surgeon is adjusting the mouth gag. The hook is inserted in one side of the mouth and the vapors given by insufflation throughout the entire operation, no other change being necessary except to change the vapors as desired. In resistant subjects the anesthol may be substituted for a short while for ether, and in easy subjects and very small children the nitrous oxid may be shut off entirely, pure oxygen used to vaporize the ether.

In adult cases I start the anesthetic with the closed method, nitrous oxid and oxygen, then change to the vapor mask and follow the same technic as outlined for children, omitting the orange oil since the patient is already partly asleep.

Not only does this method admit of ready control of the patient at all stages of the operation but it offers many other advantages that may be summed up as follows: The induction of the anesthetic is pleasant to the patient who at no time smells ether or anything else disagreeable; consciousness is soon lost and in a very pleasant way; there is practically no excitement or struggling, and the addition of a high perecntage of oxygen to the warm vapors is amply sufficient for oxygenation purposes, the color is splendid throughout; respiration is seldom labored, but approximates that of natural sleep; coagulability of the blood is increased by the perfect oxygenation, and there is less outpouring of saliva; less ether is used than by any other method I know of. In over two hundred tonsil anesthesias I have averaged less than three ounces of ether to the case, the patient being under just enough to abolish the reflexes that would tend to annoy the operator.

The recovery from the anesthetic is a triumph in itself; the patient recovers consciousness in a very short time with a marked favorable difference in appearance as compared with a case where straight ether has been used. Indeed a large percentage of cases do not have any nausea and vomiting, and are agreeably surprised with the pleasant way they went to sleep and the fact that they experienced little or no discomfort afterwards from the anesthetic. I have not had one but I have had hundreds tell me this, among them a number who can recall previous distress from etherization.

As to preliminary medication in tonsil operations I prefer atropine alone since morphine has a tendency to depress respiration. While morphine is excellent as a preliminary to any closed method of anesthesia it is not indicated in a very open method like oral insufflation. It must be remembered that in the open method there is little or no rebreathing and the perecntage of carbon dioxid in the blood becomes lowered. Carbon dioxid in certain definite amounts is a

stimulant to the respiratory centre. Atropine in medical amounts is not only a stimulant to respiration but it aids by lessening secretion. In adults I prefer to give it hypodermically in the dose of from 1/100 to 1/150 of a grain twenty minutes before operation. Children under ten years of age seem to get along very well without any preliminary medication, and if anything is used a small dose of atrophine answers the purpose.

Oral insufflation not only provides good anesthesia in tonsillectomy but answers the purpose equally well in all oral surgery, and in the light of present day knowledge when we are attempting to suit the method of anesthesia to the patient and operative procedure no hospital can afford to be without the latest and best apparatus, and equally as important, some one who has made a special study of anesthesia, for good anesthesia not only enables the surgeon to put forth his best efforts in the sort of work he may be proud of years after, but is far more pleasant to the patient and reduces postanesthetic by-effects to a minimum.

THE LAITY

By Joseph A Porter, M. D., Littleton, W. Va.

The laity is that large conglomerate mass of humanity upon which the doctor depends for his daily bread, and upon which, to quote the opinion of some of members thereof, he also preys. This is the form of the word that is spelled p-r-e-y, for not many doctors, of the medical persuasion at least, give any attention to the other form of the word, that is, the one spelled with an A. I can note one exception to this statement however, in the case of one of my surgeon friends, who, in an emergency case in which he was very much interested, said he prayed. No one present had heard him say a word, and were consequently much surprised when he made this statement, but to do him justice, I think he made some sort of a silent plea, and he said further that he thought his prayer would be successful, giving as his reason, that he didn't bother God very often, and consequently had formed the opinion that any petition which he might make, ought to have considerable weight at the Throne of Grace. Now then, whether he prayed for the person upon whom he was operating, or for his own honor and glory, no one knows, and I must say, that personally, there has always been considerable doubt in my mind of his disinestedness in the matter; but as Irvin Cobb says, "Never-the-less and to the contrary not-with-standing," the patient made a remarkable, and I might say, almost miraculous, recovery in comparatively short time. A member of the Laity is called a layman, and a layman is any one who is not a doctor. I am not speaking now of the Doctors of Divinity, of Doctors of Law, or Doctors of Dental Surgery, or Doctors of Music, nor of any one else, but the ubiquitous Doctors of Medicine. The Laity is divided into those members that are well endowed with this world's goods, and into those that are not, and unless the latter class have laid up treasures in heaven, which is doubtful to say the least, they are in a bad way, for their goods on earth are almost a negative quantity, and may be represented by the letter X.

These poor members of the Laity, I wish to divide again into three groups, which may be called, to use the classification of one of my old Professors, "God's poor, The Devil's poor, and The poor Devils," and it is of the second class, or the devil's poor, that I wish principally and particularly to speak. If my observations do not coincide with the experiences of other doctors, it may be perhaps that they have been fortunate enough to come into contact with a different class of the Laity. I may say here that the devil's poor are not necessarily in financial distress, but they never accumulate any tangible possessions or property, and may be very properly described as typical deadbeats.

The Laity as we find it is composed of representatives of every known country under the sun, and I think the members thereof spend very little time at any other vocation than that of hatching ways and means to deprive the poor doctor of his living. But for pure dyed-in-the-wool cussedness among this cosmopolitan crew, the native-borned American layman takes the lead. He is usually shiftless, worthless, and formerly, but not now, drunken, and impecunious, and if there is any scheme or trick by which he can gain his ends that he is not acquainted with, why such a trick "just ain't." When I made the remark just now that he was no longer a drunkard, I did not mean to credit him with any newly acquired virtue for the reason, that circumstances, over which he had no control, has placed the means of getting drunk beyond his reach.

Bret Hart has a little poem called "The Heathen Chinee" in which he says:: "For ways that are dark, and for tricks that are vain, the heathen Chinee is peculiar," and it takes very little stretching of the imagination to apply the same idea to the modern Laity. Just for instance; some member of the Laity will engage a physician for, say a confinement, months ahead, and, after the poor doctor, who is acting in good faith, has waited patiently, perhaps of the forthcoming fee, some day, some old woman of the neighborhood will tell him the baby he is looking for is probably a month or two old, and the family will dodge him assiduously until they need him, when they will explain by telling him the labor came on so suddenly that they had no time to call him, or some equally absurd story.

An experience of this kind happened to me early in my professional career. I was sitting in my office one day when a woman entered, and one could see with half an eye that she was in that condition in which a woman, who loves her husband, desires to find herself, and it seemed, judging from her appearance, as if she would liable to contribute her small quota to the already teeming population of the world at any hour. When she came in, she said to me without any preliminary talk: "Doctor I want you to keep your shoes handy, for I am about to call you at any time; I expect to be confined now very soon, and I want you for my doctor. I've heard you are the best doctor in confinements we have ever had in this community." I put on my very best professional air and said: "Madame I shall be pleased to take care of you in your approaching accouchment," note the word "accouchment." Whenever you need me, just let me know

and I will be there immediately." I was very much elated and began to have very well developed ideas of my own importance, and I sat around in my office and waited, and waited, and waited, and some two or three months later, I met one of the lady's neighbors on the road one day and said to her: "Sarah, has Mrs. So-and -so got her baby yet?" "Lawsy massy doctor," she replied, as she spat out a mouthful of snuff juice, "that baby's a month old." "Is that so, is that so," I rejoined, and went on sadly thinking of the perfidy and duplicity of human nature, as demonstrated by the members of the great American Laity.

The members of the Laity will carry tales and they are adept in camoflaging the meaning of the spoken word, and one must be constantly on his guard to avoid falling a victim to their specious line of talk. I had one of those fellows argue for nearly an hour one day, trying to induce me to make a visit in his family. I knew another physician was in attendance, and I also knew he had no good reason for wishing to make a change, because he was getting better service than he deserved as it was. He called his attending doctor a skunk and a rascal, a knave and many other opprobrious epithets and said "he," meaning the doctor, "could not doctor a cat for him," which, by the way, seems to be a favorite expression with these people, and he wound up his tirade by calling the poor doctor a "puke," whatever that is, and he lied about the poor fellow so fluently and continuously that I'm sure he, meaning the layman, lost his hope of heaven on the spot. I listened to him patiently, and when he had finished, I firmly refused to visit his family, which action, or rather inaction, on my part brought the remark from him, accompanied with a look of withering scorn, "Well, you're a hell of a doctor." While he was haranguing me I noticed a spasmodic contraction of the muscles of his neck at intervals, which seemed to pull his head downward and to one side, something after the manner of the contortions a chicken goes through with when he has eaten his corn too fast, and I wondered if it might not be the truth trying to rise to his lips, if it was it never reached its destination.

Every one of us has had experiences with the Laity that has tried our souls, and almost made us curse the day we ever studied medicine. The foolish, senseless, inane and asinine acts of the Laity have worried many a good man of the medical profession into an early grave, and made drunkards and dopsters of many others who might otherwise have reached the highest pinnacle of success. No consideration is shown by any member of the Laity to any man of medicine. In snow or rain, hail or sleet, through wintry blasts or summer's burning heat, at blackest hour of midnight, or in the rosy dawn of coming day, he is supposed and expected to answer every call made upon him by this insatiate monster, the Laity.

One hot day in mid-summer, a family sent for me in an awful hurry, the messenger coming in fearful, breathless haste, and grasping out that Prudy, one of the daughters of the family, aged about seventeen, was dying. I immediately rushed to the scene about half a mile away, and up hill at that, to find Prudy lying

on a lounge, with no sign of impending dissolution, and if my memory does not fail me, eating an apple; in fact she was the most comfortable person in the whole assemblage. As soon as I could get breath enough to make some inquiries, I found out that Prudy had had a hemorrhage from the nose, ears, mouth and eyes, and there was yet a slight oozing from the mouth and ears. I discovered further that it was time for her menstrual period which had not showed up in the usual way, and I naturally came to the conclusion that it was a case of vicarious menstruation pure and simple, which subsequent events showed to be correct, and nothing in the world to get excited about and make a man weighing 240 pounds do the footwork I did over a half mile, uphill track. But such are the inscrutable ways of the Laity, and exaggeration and misrepresentation is the middle name of the members thereof.

In the far southwestern country, near the Mexican border, where the deserted villages of the cliff dwellers stand as a pathetic monument to the glory of a departed race, and where Nature has painted the bosom of Mother Earth with all the riotous, glowing colors of an enchanted land, flows the little river called the Hasayampa, and 'tis said by those who know, by those who live in this magical region, that whoever drinks of the waters of this little stream, cannot again in all his natural lifetime, tell the truth, and from my own experience with a large number of people, it seems to me that all the springs, branches, water-courses and rivers of the whole United States, are endowed with the same peculiar qualities, for the faculty of lying seems to be an ingrained part of the average member of the Laity, and this folk will take the greatest pride in airing their capabilities in this line whenever they get the opportunity, and especially, if by so doing they can put one over on some be-deviled physician, and I have seen some medical men also, that I am inclined to believe have had a draught from Hasayampa waters, and on the upper reaches of the river at that, for the nearer the source the drink is taken the more potent it becomes.

The members of the Laity seem to exercise little or no judgment, and will believe anything told them; their credulity is proverbial, and the more improbable the story, the more anxious they are to swallow it hook, line and sinker, and if a doctor says some disparaging thing of another, or reverses a diagnosis, with some uncomplimentary remarks anent the medical knowledge of the other fellow, or tosses the medicine left by the other man out of the window, they are filled with an unholy joy and say: "Doctor So-and-so showed him, he did," and "I wouldn't have him to doctor a dog for me." One morning about two o'clock I was called to a young man in the neighborhood of my office, who, the messenger said, was suffering from cramps, due, he thought, to somethig the boy had eaten for supper. When I arrived, I found the patient, a youth of probably eighteen years, suffering pain in the abdomen, of a paroxysmal character. He had had some vomiting and diarrhoea, and on examination I discovered the pain focussing around the classical region of McBurney's point, and radiating thence over

the entire upper, right diagonal, half of the abdomen. He had a slight elevation of temperature, with very little disturbance of the circulation. I gave an opiate, and ordered ice to the abdomen, over the seat of pain, and recommended an operation for the removal of the appendix as soon as the acute symptoms subsided. By my advice I invoked a storm of abuse upon my poor head by different members of the family; such epithets as "butcher," "cow-doctor," and "ignoramus," were applied to me without stint, and the family decided so they did, to get a doctor "who knew something" and "who wouldn't cut a man up just to see what was inside of him, and in consequence of this decision thereof, as soon as they could the next morning they called another medical man, who said as soon as he got into the house that it wasn't a case of appendicitis at all, but just somethting the boy had eaten, and 'mid a chorus of "I told you so's" and "just what I thought about it," he made a triumphal exit from the house, after telling them I ought to be prosecuted for recommending an operation at all. Before he left the house however, he told them to keep up the treatment I had ordered, saying, that as there was not very much the matter with the boy, my treatment was as good as any, and if it did not do any good, it wouldn't do any harm, thus managing to get the benefit of my recommendations for the patient, and giving me a slap going and coming at the same time. I bore the scurrilous obloquy of their vituperative speech with what fortitude I could command, and bided my time, for I knew a day of reckoning would come and my judgment would be vindicated. In a few months the boy had another attack of the same kind, and the same doctor who had superseded me before was called, and immediately on entering the house, he threw up his hands, exclaiming that it was a fulminating attack of appendicitis, and that the patient must be operated as soon as possible. The patient was hurried to a hospital in a neighboring town where the appendix was removed and where he of course, made an uninterrupted recovery. The doctor in the case made two diagnoses, diametrically opposed to each other, within six months, and got away with it, and I cite the occurrence to show the bull-headed obstinacy or the pig-headed stupidity, whichever you choose to call it, of the Laity, and the manner in which a smug, slick, suave, smooth-spoken person can mold its members to suit his purpose. In the estimation of the family, that doctor wore a kingly crown and was clothed in robes of royal purple, while between them and me there was a great gulf fixed, even as great as that between Lazarus afar off in Abraham's bosom, enjoying all the heavenly delights of Paradise, and poor Dives burning up in Hell.

The members of the Laity are the most honest people in the wide world, but there is always something happening to prevent them from paying their honest debts. One old man, who has now passed on to his reward, God rest his soul! wanted to pay, of course he did, but there was just always just something turned up; it just seemed he never could make the riffle; he'd have a horse to die, or a spell of sickness, during which the doctor would get stuck deeper than ever or, as on

having no one to help him, he got them out of the wagon by letting them slide from the rear end of the bed, down his leg in some way. He had in his pants pocket at this time two or three dynamite caps, and when the stove slid over them, they exploded and injured him in a very grievous manner. A hole was blown in his left leg, in the middle of the upper third of the thigh, on the inner surface that would admit a fist; the Anterior Crural Nerve, the Femoral Artery and the lesser structures of that region were laid bare, and, owing to shock he was in a serious condition. I was just a newcomer in the neighborhood and had no acquaintance with him, and as I appeared before him, he greeted me so kindly and pleasantly that I thought "what a pity that such a fine man should receive such an awful injury." As I prepared to dress his hurt, he said: "Doctor your money is ready for you, just as soon as you get me cured," and then as an after-thought he remarked further, "Yes, and if you tell me how much it will be, I will pay you now," and I remarked to myself, "what an excellent gentleman; here's a man who has a keen perception of the relations existing between the Laity and the physician; here is a man who realizes his dependency on his doctor," and I told him we would arrange the small matter of payment when we finished treating him. As I proceeded with the cleansing and dressing of his wound he remarked again, "Doctor, I'll have to live closer to God after this, He's been so good to me." And again in my self-communion I said "What a very, very fine old fellow this is," and he rose in my estimation by leaps and bounds, on occasion when he was making his excuses, he had a sow to sell and couldn't do it, for, as he said, she was "frolicking," but just as soon as she got over it she was going to the butcher, "By gosh she was!" Some of them are always afflicted with a so-called temporary, pecuniary embarrassment; one will come in, "Oh doctor, the old woman has a bad cold," or, "I ain't feelin' right peart, I've got a powerful misery in my back, I'm afraid its my kidneys," and he will place his hands over his Glutei Maximi, or in other words, the portion of his anatomy most used in sitting down, and groan and rub as if the pain was beyond human expression and endurance. After you have examined him, and prescribed for him, and he gets his medicine in his hand, he'll say, "Doc, I'm just a little short today, will it be all right the next time I come to town?" And the strangest thing now occurs, for, although this fellow has been coming to town twice a week all his life, it seems, for all you'll see of him, that he has suddenly ceased making his usual bi-weekly visits, and he couldn't disappear more completely if the earth had suddenly opened and swallowed him neck and crop. "Oh for a lodge in some vast wilderness" where we might for a little while, lose ourselves from the machinations of the Laity.

In the very earliest years of my practice, I was called one day to see a man who had been unfortunate enough to come in contact with a quantity of dynamite, during its period of greatest activity. He was a dealer in stoves and junk, and on this occasion he was unloading some new stoves he had purchased, and

until by the time I finished my dressing I had him almost pictured as wearing a halo. He gave me an immense amount of trouble. He had an old prostatic condition, and consequent difficult micturition, and whenever his bladder would get full, and I would attempt to use the catheter he would immediately have a priapism, and a most lasting and obstinate priapism, and once when the center for erection was most probably asleep somewhere in the fastnesses of the lumber cord where it is located, I managed to pass a steel catheter, when the center suddenly came to life, Priapus suddenly asserted himself, and I was suddenly in an awful predicament; that catheter in the bladder, and that priapism in possession, and such a priapism; it seemed enduring, eternal, and never-ending, and as unyielding as the everlasting hills, and when I would attempt to remove the catheter it caused excrutiating agony, and notwithstanding the danger of the procedure, I had to chloroform him to get it out. His heart was bad, in more ways than one, as I afterward found out, and cardio-renal symptoms supervened, and he taxed my knowledge to the utmost and beyond, and I sometimes wished fervently that God, whom he seemed to love so well, had taken him before I met him; but I remembered his glowing promises, and I sustained myself with the thought that he would reward me munificently at the end, for at that time I had a full and abiding faith in human nature, which has in later years, been largely dissipated: Well, in the course of events, I restored him to his usual state of health, and I was somewhat surprised,, when I told him at the last dressing that I would not need to see him again, that he did not mention anything about payment, and I thought the matter must have slipped his mind, and I guess it did most effectually. However, time moved along as it has a well known habit of doing, and at last I sent my erstwhile patient a bill, for, what was in my opinion, a very reasonable sum. When he received the statement he looked at it, noted the amount, threw the inoffensive paper on the floor, stamped on it with both feet, and remarked in a loud voice to nobody in particular and everybody in general, "I wonder if that damned doctor thinks I'm made of money;" and his profane utterances seemed so completely out of place, coming from the lips of one who loved God so much, that I was grieved and surprised beyond measure when I heard of it.

I must digress here to say however, that with all his fluency in objurgatory invective, he never did reach the divine heights of genius attained in that line by Dr. Bill Taylor of Irwin, Pa., whom I met in later years, and, who, after our acquaintance ripened into friendship, told me to what he attributed his proficiency in the use of profane language. He said that he, in his boyhood, together with his small companions, used to frequent one of the livery stables in his home town, and he said further, that the fact that the loungers around this stable placed a premium on vice, together with a strong natural inclination and talent in that direction, had enabled him to acquire his extensive and exhaustive knowledge of profanity. He told me that the hangers-on around the place would take up a collection of twenty or thirty cents, and placing this as a prize, would give it

to the urchin who could swear the most originally, the loudest and the longest without stopping. Dr. Bill took great pride in proclaiming that he always won the pot. But to return to my story; I never did get a settlement, and the following winter I needed some heat for my apartments and I managed to get a hard coal burner out of him for which he charged me a top price and later, several years later, I got another stove from him, several joints of stove pipe and what-not, and a small balance is still standing after the lapse of twenty-five years.

"Oh tempora, Oh mores!" Whenever I think of my experience in this case, it always reminds me of a wonderfully intimate knowledge of human nature displayed by the old Dutch painter who, in fifteen hundred and eighty-seven, painted a series of four panels representing the attitude of the Laity towards physicians. Under each panel he had a little verse voicing the sentiments of the physician in attendance on the sick person represented, and the verses are so applicable, that I cannot refrain from giving them.

"When the sick man lies abed, distraught with pain, and dismal death is clutching at his throat he likens me to God, and all his house kneel down and do me reverence!"

"When easier lies his head, and icy death removes his hand, and warm his blood rebounds, he blesses me as messenger of God; an holy angel from ethereal heights "

"But when the full and rosy tint of life bestirs his flesh, and puts his soul to sleep, he meets me as a man, tho' one of might, and versed in all the wisdom of the world."

"And then at last when recompense is asked, he passes me in dread, for lo, I stand a Devil horned, from out the lowest depths, and marked with hell's most hideous brand."

Nearly three centuries and a half have passed, and yet the experience of the doctor speaking in the verses is duplicated daily in our modern times. Surely there is nothing new under the Sun, and human nature has not changed since the dim and misty times of the dawn of creation, when the morning stars sang together.

"This life's a hollow bubble, Don't you know; Just a bit of painted trouble, Don't you know; We come on earth to cry, We grow older and we sigh; Older yet, and then we die, Don't you know."

EDITOR'S NOTE.

How true Dr. Porter's paper is! It is a pity that we have not the nerve to tell the Laity just what we think of it. No merchant (groceryman, tailor, merchant, thief) would do for us what we do for them.

It isn't fair.

If they have no money and are honest, my services are as free as God's air, but I'm getting darned tired of being stung by the kind he describes.

Announcements and Communications

Louisville, Ky., Nov. 28, 1921.

West Virginia Medical Journal,
Huntington, W. Va.

Dear Sirs:—The United States Public Health Service and the State Board of Health, assuming your natural interest in important movements for the benefit of our people, wish,

through the enclosed statement, to call your attention to the National Health Exposition, in Louisville, February 1-9, 1922.

We appreciate that many calls are made upon you for space, but we believe the importance of this idealistic enterprise for the public good will commend itself to your sincere consideration.

Very respectfully,
A. T. McCORMACK,
Collaborating Epidemiologist
U. S. Public Health Service.

The National Health Exposition, occupying 60,000 square feet of floor space, will be held in the Jefferson County Armory at Louisville, Feb. 1-9, 1922. This is under the auspices of the United States Public Health Service, State Board of Health of Kentucky, Jefferson County Board of Health and the Health Department of the City of Louisville. It will include exhibits in hospitalization, nursing, dentistry, medicine and pharmacy. The University of Louisville, the public school system, and various local, state and national health organizations will participate.

The annual conference of the city and county health officers, the annual convention of the Kentucky State Public Health Association and other health meetings are already scheduled in connection with the Exposition.

An institute will be conducted by the United States Public Health Service and its program will include:

Dr. J. M. Rosenau, Dean of the Harvard School of Public Health; Dr. Josephine Baker, Director of the Department of Child Hygiene, New York City Board of Health; Dr. Wm. A. Evans, former Health Officer of Chicago, and the most distinguished public health editor in America; George T. Palmer, President of the Illinois Tuberculosis Association and Director of the Bureau of Tuberculosis of the Illinois State Board of Health; Dr. Frederick E. Greene, Secretary of the Council on Health and Public Instruction, American Medical Association; Dr. Valeria H. Parker, Director of the Interdepartmental Board of Social Hygiene; Dr. John H. Stokes, distinguished syphilographer of the Mayo Clinic; Dr. Frankwood Williams, Director of the National Association of Mental Hygiene; Dr. W. S. Rankin, State Health Officer of North Carolina, a member of the Council of Health and Public Instruction of the American Medical Association and recently President of the American Public Health Association; Dr. John Dill Robertson, Health Officer of Chicago; Dr. John R. McDowell, Director of Health for the Lake Division, American Red Cross; Dr. John R. McMullen, United States Public Health Service, and Miss Frances Brink, Director of the National Organization for Public Health Nursing.

Expenses will be paid through the sale of Commercial exhibit space to a limited number of reputable firms.

December 8, 1921.

James R. Bloss, Editor,
West Virginia Med. Jour.,
Huntington, W. Va.

Dear Sir:—The first examination of the National Board, under the new plan, in Parts I and II, will be held as follows:

Part I, February 15, 16 and 17, (1922) inclusive.

Part II, February 20 and 21 (1922) inclusive.

Applications for examination should be received no later than January 15, 1922. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1310 Medical Arts building, Philadelphia, Pa.

Kindly publish this statement in your Journal as soon as possible.

Very truly yours,
J. S. RODMAN,
Secretary.

The National Board of Medical Examiners has just completed the first five years work and with it the trial period of its usefulness. The principle which this Board has stood for, namely, the establishment of a thorough test of fitness to practice medicine which might safely be accepted throughout this country and abroad, has been widely accepted. Since this Board was organized by Dr. W. L. Rodman, in 1915, eleven examinations have been held. These examinations have been conducted on the plan of holding at one sitting, a written, practical anl clinical test for candidates with certain qualifications, namely a four-year high school course, two years of college work, including one year of Physics, Chemistry and Biology, graduation from a Class A Medical School and one year's internship in an acceptable hospital. These examinations have covered all the subjects of the medical school curriculum and have been conducted by members of the Board with members of the profession resident in the place of examination appointed to help them. Such examinations have been held in Washington, Philadelphia, New York City, Boston, Chicago, St. Louis, Rochester (Minnesota) and Minneapolis. During the war a combined examination was held at Fort Oglethorpe and Fort Riley. There have been 325 candidates examined, of whom 269 have passed and been granted certificates.

Starting with the endorsement of the Council on Medical Education of the American Medical Association, American Medical College Association and various sectional Medical Societies, the recognition of the Army, Navy and Public Health Service Medical Corps of the United States and certain State Boards of Medical Examiners, the certificate is now recognized. Also by twenty states as follows: Alabama, Arizona, Colorado, Delaware, Florida, Georgia, Idaho, Iowa, Kentucky, Maryland, Minnesota, Nebraska, New Hampshire, New Jersey, North Carolina, North Dakota, Pennsylvania, Rhode Island, Vermont and Virginia, the Conjoint Board of England, the Triple Qualification Board of Scotland, the Ameican College of Surgeons and the Mayo Foundation of the University of Minnesota.

There has been such a wide-spread demand for an opportunity to secure this Certificate by examination, that the Board has now adopted and will put into effect at once, the following plan: Part I, to consist of a written examination in the six fundamental medical sciences: Anatomy, including histology and embryology; Physiology; Physiological Chemistry; General Pathology; Bacteriology; Materia Medica and Pharmacology. Part II, to consist of a written examination in the four following subjects: Medicine, including pediatrics, neuropsychiatry and therapeutics; Surgery, including applied anatomy, sur-

gical pathology and surgical specialties; Obstetrics and Gynecology; Public health, including hygiene and medical jurisprudence. Part III, to consist of a practical examination in each of the following four subjects. Clinical Medicine, including medical pathology, applied physiology, clinical chemistry, clinical microscopy and dermatology; Clinical Surgery, including applied anatomy, surgical pathology, operative surgery, and the surgical specialties of the diseases of the eye, ear, nose and throat; Obstetrics and Gynecology; Public Health including sanitary bacteriology and the communicable diseases.

Parts I andII will be conducted as written examinations in Class A Medical Schools and Part III will be entirely practical and clinical. In order to facilitate the carrying out of Part III, subsidary boards will be appointed in the following cities: Boston, New York, Philadelphia, Minneapolis, Iowa City, San Francisco, Denver, New Orleans, Baltimore, Galveston, Cleveland, St. Louis, Chicago, Washington, D. C., and Nashville, and these boards will function under the direction of the National Board.

The fee of $25.00 for the first part $25.00 for the second part and $50.00 for the third part will be charged. In order to help the Board the Carnegie Foundation has appropriated $100,000.00 over a period of five years.

At the Annual Meeting held June 13th, of this year in Boston, the following officers were elected: M. W. Ireland, Surgeon General, President; J. S. Rodman, M. D., Secretary-Treasurer; E. S. Elwood, Managing Director.

Mr. Elwood will personally visit all Class A Schools during the college year to further explain the examination, etc., to those interested. Further information may be had from the Secretary-Treasurer, Medical Arts Building, Philadelphia.

LIBERAL RULING

By the Government Favoring Disabled Service Men and Women—May Now Reinstate Lapsed or Concelled Government

Mr. Chas. R. Holt, Manager of the United States Veterans' Bureau in this district, has announced that under a recent ruling the government has agreed to permit the reinstatement of lapsed or cancelled government insurance by disabled former service men and women whose injury or disease was incurred in or aggravated by their active military or naval service (provided however that they are not totally and permanently disabled). Mr. Holt feels that this information will be welcomed by many hundred disabled soldiers, sailors and marines in his district as many of them had endeavored to get back their insurance, but were unable to do so because of their not being able to pass a satisfactory physical examination.

A physical examination will be necessary so as to determine whether or not the applicant is totally and permanenty disabled. This examination may be had at the expense of the government by a United States Veterans' Bureau physician, or should the applicant so desire, he may go before any reputable physician licensed to practice medicine for the examination, but at his own expense. All

back premiums will also have to be paid plus interest at five per cent per annum, compounded annually.

Any person desiring to reinstate their lapsed or cancelled insurance may get all information, including the amount of premiums in arrears, by getting in touch with Mr. Chas. R. Holt, Manager Veterans' Bureau, Masonic Building, Charleston, West Virginia. In writing to him, information should be given as to the month and year the last premium was made, as well as the amount of insurance desired to reinstate. Those persons who are in as good physical condition as when they permitted the insurance to lapse, may reinstate by paying but two back premiums and submitting themselves to a physical examination under the same conditions as set forth above except that if it has not been lapsed for a period exceeding three months, just a statement by the applicant as to his condition; if for more than three and less than six months, just a short examination is required, but over six months a full examination is necessary.

The West Virginia counties coming within the jurisdiction of the Charleston office are: Kanawha, Clay, Putnam, Cabell, Boone, Lincoln, Logan, Wayne, Raleigh, Fayette, Summers, Greenbrier, Pocahontas, Nicholas, Braxton, Webster, Calhoun, Jackson, Roane, Mason and Monroe.

Very truly yours,

CHAS. R. HOLT,

Manager of the United States Veterans' Bureau, Charleston Sub-District.

DIETITIANS NEEDED IN U. S. PUBLIC HEALTH SERVICE

Washington, D. C., Nov. , 1921.—

The United States Civil Service Commission states that there is need for a considerable number of dietitions in the Public Health Service at hospitals throughout the United States and that until further notice it will receive applications for such positions.

The basic entrance salary offered is $960 a year with possible promotion to the basic pay of $1344 a year. To all salaries there is added the increase of $20 a month granted by Congress. In addition, quarters and subsistance are furnished free by the government.

Applicants are not required to undergo a written examination, but are rated upon the subjects of general education, weighted at 30%, and technical training and experience, weighted at 70%.

Full information and application blanks may be obtained by communicating with the United States Civil Service Commission, Washington, D. C., or with the secretary of the local board of civil service examiners at the post office or customhouse in any city.

The West Virginia Medical Journal

JAS. R. BLOSS, M. D., Editor
C. R. ENSLOW, M. D.
J. E. RADER, M. D. Assistant Editors

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are reguested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

ADVERTISEMENTS

Advertising forms will go to press not later than the 10th of each month.

All advertisement must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money or express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

Editorial Office: 804 Lincoln Place, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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DELEGATE TO A. M. A. 1921-22—Jas. R. Bloss, Huntington; Alternate, W. W. Golden, Elkins.

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FIRST DISTRICT—C. G. Morgan, Moundsville, one-year term; H. P. Linsz, Wheeling, two-year term.

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SIXTH DISTRICT—R. H. Dunn, Charleston, one-year term; J. W. Moore, Charleston, two-year term.

CHRISTMAS AND NEW YEAR

One can hardly know just how to begin a welcome to you this year.

Christmas and New Year greetings have been written and talked over until they are rather stereotyped things. One may tell you that it is only just the regular Christmas greeting.

Most of you know your editor personally. You know he is not given to platitudes and so on.

When he tells you that his most sincere wish is that you do have a Merry Christmas and that the New Year may be a happy and prosperous one, you know he means it.

Life is a complicated problem. There are none of us who do not need all of our friends. Occasionally one of us may get an idea that he does not need his friends in the profession, that he is too "big" to need them and so on. As a little boy friend of mine, only three years old, said on an hallow'een after looking some of his playmates, in costume, over, "Damned Little Fools."

I do wish every man in our Association all of the very kindest and best things.

NEWS AND SO ON

You can see just what a dearth of County and State news there is this month. Your editor has been seriously criticised for these departments

There often occurs to him the question as to just how he is expected to get these items. Only occasionally does any one, County Secretary or any one else, send it anything. Yet he is expected to be Omnicient.

Two years ago this was the criticism of the Editor.

Will you please tell him whose fault it is?

THE LAITY

Sometimes we feel that we should never consider them except as a means of livelihood. Why it is that they feel we have some ulterior motive when we try to help them stay well, and thus "cut our own throats," is beyond our comprehension. We, physicians, do try our level best to help folks and yet they do not cooperate.

They will go to hear a revivalist.

Just what do you think God must think of persons who will not use their brains for any other purpose other than the hysteria of charming words?

THE INTELLECTUAL SNOB IN MEDICINE

The snob is always with us and the snob is always vile. The social snob, the moneyed snob, and the intellectual snob, each ever trying to impress all about him with his own particular brand of superiority. In medicine we see him, the recently graduated interne of the big hospital, unable to confer with a colleague of commoner general-practitioner clay without betraying his contempt for the other's lack of familiarity with recent scientific investigations, and at the same time utterly unable to appreciate, much less to imitate, the fine acumen and mature judgment which characterize the opinions of his older confrere. Later we see him, the would-be leading consultant, unable to keep out of his conversation such phrases as "When I worked with the Mayos" or "In an article I published last May," and all too willing politely to ignore suggestions of one whose association with the leaders of the profession has been less intimate than his own. When it comes to the carrying of hope and aid to the stricken in mind and body or to the building up of the morale of the family, such a man is worse than useless and his exhibitions of erudition are the acme of futility.

The field of medicine is too broad and the opportunities for careful observation too general for anyone to assume that he can know the hundredth part of it all or that his brother with less conspicuous advantages must be an ignoramus. The mass of the unknown still looms so great a bulk across our path that we can but approach each problem in the spirit so emphasized by that great teacher, Sir William Osler,—the spirit of humility.—Ed. R. I. Med. Jour., Dec. 1921.

When have you read a more pointed or a propos thing than this? Do you not know just such fellows; Not long ago we were asked why we did not

take a certain young man for an associate.

"I am no orator, as Brutus is," yet the Brutus speaking above expressed my ideas and feelings exactly. Bluntly my comment was "big head." How awful it is that so many men feel that sick persons are just cases and to be studied and handled in that impersonal way one stacks cordwood.

Then we do find that they have such an intolerance for an opinion from a practitioner of forty (or less) years of experience. A young physician from a wonderful medical college of international repute has no conception of the value of Calomel or Castor Oil in the treatment of infants, yet he is intolerant toward one who has and does use them.

Most of us started home from medical college expecting to be met with a coach and four and a brass band to welcome "the Super-Sims."

Personally I'll say I had "to tote" my own suit case to my father's house.

State and General News

Dr. J. M. Tetor, who has been in Huntington, has returned to his former practice at Petersburg.

Dr. Chas. W. Umbarger has changed his location from Selbyville to Flatwoods.

Dr. Kent Royal, rormerly connected with the Sheltering Arms Hospital at Hansford, is now at Welch Hospital No.1, at Welch.

Dr. F. L. Sturgil of Ceredo, has gone to Tampa, Florida for the winter.

Captain J. S. Gibson, medical corps, U. S. A., of Camp Lewis, Washington, visited in Huntington recently. He is on leave of absence, and in January will enter Johns-Hopkins University for a six-months' course.

Dr. A. G. Rutherford of Thacker, was made Superintendent of the Welch Hospital in July. He has as assistants Dr. Kent Royal and W. W. Wilson.

Dr. Seale Harris, former Secretary-Treasurer of the Southern Medical Association and editor of its journal, was elected President of the Association at its meeting in Hot Springs, Arkansas.

Drs. J. E. Rader, C. T. Taylor and Jones of Huntington, attended the December 6th meeting of the Kanawha County Medical Society.

Surgery

TONSILLECTOMY UNDER LOCAL ANETHESIA

Cowley (Kentucky Med. Jour. Aug., 1921,) says that a neater and more perfect operation for tonsillectomy can be done under local than under general anesthesia. One has the patient under better control than is possible under general anesthesia; there is less bleeding; and, as the fossae can be inspected to better advantage, it is possible to dissect with greater exactness and certainty.

With procaine, the operation can be done on nearly all patients without pain. About the only exceptions are patients with old abscess cavities back of the tonsil.

In certain other patients, there is an apprehensive fear of the operation which is almost as distressing as is pain itself. Much of this disappears when it becomes known that neither

ether or chloroform are to be used and that the patient will not be "put to sleep." For the rest, a dose of hyoscine-morphine-cactin will eliminate the nervous apprehension in most instances. The author gives it to all his patients, half an hour before operation.

His conclusion is, that an operation under a local anesthetic (procaine) is usually safer, pleasanter than, and in every respect preferable to general anesthesia.—Clinical Medicine.

LINES OF ADVANCE IN SURGERY OF BREAST CANCER.

Handley (British Medical Journal, 37, 1921, 3132) maintains once more that the fascial lymphatics, and not the skin, furnish the main lines of advance in breast cancer. For this reason, the essential point in its surgery is not so much the sacrificing of a large area of skin as of that of its underlying fascia. He believes that the interests of the patient, meaning by this her comfort, demand operation regardless of what may reasonably look like an assured recurrence. In spite of the presence of axillary involvement in 90 per cent of the patients upon whom he had operated, 48 per cent of these who could be followed have shown no traces of recurrence for three years. Most recurrences have been of the "supraclavicular" and "intercostal" types. As regards the role of radium X-Rays in breast cancer, he believes it hardly possible that radium alone ever cures the condition without operation, for the reason that the skin will tolerate only maximum doses much too small for any but Carcinomatous deposits immediately under the skin. The action of radium is intensive, that of X-Rays is extensive; hence the value of the former for single nodules or limited areas, and that of X-Rays for multiple or extensive ones. C. R.

MEDICINE

CAN PATHOLOGICAL SOMNOLENCE BE CONSIDERED A FOCAL SYMPTOM?

A case is reported of a man 29 years old with marked and early onset of somnolence and paresis of the right facial muscles, and also of the superior levatores palpebrae and tongue muscles. The pupils did not react, and singultus was frequently seen. Encephalitis lethargica was suspected. At autopsy, the lateral and third ventricles of the brain were widely dilated and a chestnut-sized tumor was found in the left optic thalamus with pinhead-sized hemorrhages in the caudal end.

The cause of the internal hydrocephalus was increased transudation in the choroid plexus and diminished reabsorption from the ventricles. There was no obstruction of the aqueductus sylvii and no signs of inflammation reaction. The internal hydrocephalus increases the intracranial pressure, thus completeing the vicious circle. The somnolence was due to disturbances in the course of the nerve-tracts of the various end-organs from the thamolic tumor which prevented the usual sensory stimuli from reaching the cerebral cortex, thereby inducing sleep. The obstruction to the stimuli is not absolute, since the patient can be aroused by increasing their intensity, as by

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loud speaking, prodding, etc. The same condition is found in encephalitis lethargica. In order to determine whether or not somnolence is a focal symptom it is important to know the extent of involvement of one or both thalami. Somnolence as a result of toxemia of the cerebral cortex due to various substances, or to general intracranial pressure must be excluded.—G .O. E. Lignae, Berl. klin. Wchnschr., Apr. 25, 1921. (K. A. M.)

THE CAPILLARIES AND ACIDOSIS

Many of the products of incomplete combustion in the body are of a character of "fixed" or nonvolatile acids. When they find their way into the blood they displace carbonic acid by combining with the alkali present, and thus the alkali reserve is reduced. This is a now familiar type of acidosis which is considered an abnormal if not a relatively hazardous condition. Physiologists have often inquired where the preliminary process goes on. Is it in the liver, in the muscles, or in some other conspicuous tissue? Reasoning that a damage to the capillary walls with a resulting decrease in permeability might prevent the adjacent tisues from receiving an adequate blood and oxygen supply, Wallace and Pellini have studied the effects of substances which are known to produce such harm. As a result of their experiments at the University and Bellevue Hospital Medical College, New York, they have found that uranium, cantharidin, arsenic, and diphtheria toxin, which cause widespread capillary damage, bring about a definite acidosis, as shown by a decreased concentration of bicarbonate in the blood plasma. Podophyllotoxin and emetin, which appear to have an action seemingly confined to the intestinal capillaries, do not cause acidosis. The same thing is true of hydrazin, a recognized "liver poison." If acidosis may thus be one of the effects of "capillary poisons" of the type that produce structural changes, it should follow, so the New York pharmacologists argue, that other agents which interfere with an adequate supply of oxygen to the tissue in other ways would also cause acidosis. This seems to be the case; for nitrites, which induce methemoglobin formation, and cyanids, which prevent the utilization of oxygen by the tissues, bring about a marked acidosis. As marked damage to the liver and intestine may fail to induce acidosis, and the kidney also is not a necessary factor, Wallace and Pellini believe at present that the essential condition is an injury to the capillaries of the muscles.

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TREATMENT OF INFECTIONS OF THE CERVIX.

By
R. J. Wilkinson, M. D., Huntington, W. Va.

Read Before the Surgical Section W. Va. Medical Assn., Charleston, May, 1921.

It would seem appropriate to briefly discuss the etiology of cervical infections and some of the complications developing secondary to this condition before considering the question of treatment.

Infections of the cervix are acute or chronic; primary or secondary. The organisms most frequently found are the colon bacillus, staphlococcus and gonococcus, however, any of the pyogenic germs may be responsible. Trauma is the one predisposing cause, whether it be laceration due to labor, curettage, the result of foreign bodies, as pessaries, or the irritating effect of strong douches. Such an infection does not remain limited but as Sturmdorf says, "it soon involves the entire endocervial mucosa from the external to the internal os."

The mild infections give no symptoms other than a mucoid leucorrhea and is frequently not progressive, however, there is little tendency toward a spontaneous cure.

I agree with Mathews that the continued congestion of the cervix produces a hypersecretion of mucous from the cervical glands, which is later followed by hyperplasia and hypertrophy of the connective tissue, finally occluding the crypts producing what is frequently spoen of as a cystic cervix.

In this way the germs gain access to the deeper tissues of the cervix and later give rise to an ascending lymphangitis which may extend into the parametrium then through the lymphatics to the pelvic organs.

The lymphatic stasis, which is obviously the result of infection, invariably produces a hyperemia of the pelvic organs which is later

followed by a passive congestion, the result being a boggy enlarged uterus, which may be retro-verted, varicose veins of broad ligaments and retention cysts of the ovaries.

A very large percentage of women who present themselves for treatment of so-called female trouble, if properly examined, will be found suffering with an infection of the cervix. It is also surprising to note the number of patients who have infected cervices without giving symptoms directly referable to same.

It would therefore seem absolutely necessary that all gynaecological cases should be carefully examined to determine the presence of cervical infection before advising treatment.

The treatment of cervical infections has been very unsatisfactory and the results have been uniformly bad, due, I believe, to the fact that we have failed to understand the existing pathology. Frequently patients presenting symptoms of chronic pelvic infections are subjected to laparotomies, functionating ovaries are removed because of retention cysts and not unfrequently hysterectomies are performed, without attempting removal of the focus of infection. Likewise we often fail to effect cure by treating the cervix and leaving the pelvic pathology undisturbed. In the past many surgeons have relied upon the curett to relieve these patients, diagnosing the condition chronic endometritis when as a matter of fact, it is hard to conceive of a chronic infection of the uterine mucosa, when we consider the change that is constantly taking place place. The curette has no place in gynaecological work, except in obtaining specimens for microscopical study.

It is a recognied fact that the treatment of an infected cervix is essentially a surgical problem, however, before operating these cases there are many points worthy of serious consideration. In the first place let us not lose sight of the fact that carcinomata of the cervix is on the increase. When in doubt as to the existence of malignancy, I believe we are justifyable in removing a section for microscopical study before determining the final operative procedure. Whether malignancy is suspected or not all tissue removed from the cervix should be carefully examined by a competent pathologist, for it seems logical to believe that malignancies of the cervix are often secondary to a low grade chronic infection of long standing.

Again, syphilis may be the cause of an apparent infection of the cervix and no doubt we will occasionally be rewarded, if a routine Wassermann is done on these cases,

Finally, one must realize the importance of determining the extent of the infection. It is obvious that we cannot cure these chronic cases regardless of the method employed unless we remove the focus of infection and at the same time correct any existing secondary pelvic pathology.

Where the infection is limited to the cervix, amputations have given the best results, however, such eminent authorities as Edgar Davis, Williams, and others condemn this procedure during the childbearing period on account of the disastrous results attending subsequent la-

bors. Statistics prove that a large percentage of these women have premature labors not to mention the other complications of faulty presentations, and hemorrhage due to lacerations. It would seem reasonable then that every case requising amputation should be sterilized. The repair of an infected lacerated cervix has not been satisfactory in my very limited practice and I doubt the wisdom of doing this operation. If infection is present the results are poor; if we have no infection there is little or no indication for surgical interference because the scar tissue will be equally as much in evidence after the operation as was found following the original tear, with the likelihood of a secondary infection developing. The exception to this rule is where the laceration is extensive involving the internal os, without the presence of infection.

The operation of Sturmdorf certainly seems to be the operation of choice, especially in those cases who are likely to become pregnant, in that it attempts to conserve a considerable amount of the muscle tissue. Should it be impossible to remove all of the infected tissue by this method then the operation becomes an amputation and should be followed by ligation of the tubes, unless the patient has reached the menopause.

If the patient gives symptoms referable to the pelvic viscera, notwithstanding the fact that we are unable to determine the exact pathology by examination, then these cases should be explored and given the necessary treatment at the same time we operate the cervix.

Small erosions are not infections in the true sense and are usually amenable to local treatment, however we must not lose sight of the fact that these seemingly innocent erosions are frequently percancerous lesions. Should local treatment fail to effect a cure after a few weeks the condition becomes a surgical problem and should be handled accordingly.

In conclusion I would like to emphasize the following points:

1. Chronic infections of the cervix are frequently, if not always accompanied by secondary pelvic complications.

2. To effect a cure it is necessary that the pelvic pathology be corrected at the same time we are remvoing the infected cervical tissue.

3. All tissue removed from the cervix should be examined by a competent pathologist.

4. It is possible to have an infection of the cervix without symptoms directly referable to same.

ADVANTAGES TO BE GAINED BY THE CO-OPERATION OF PHYSICIAN AND PHARMACIST.

Read at Annual Meetng of W. Va. Medical Assn., Charleston, May, 1921.

By John C. Davis, Ph. G., Wheeling.

First of all I congratulate you on the long years of work this association has done. The fact that you are fifty-four years old is evidence of stability and enterprise.

The privilege of permitting a representative of the West Virginia Pharmaceutical Association to come before you with a paper bearing on "Advantages to be gained

by the co-operation of physician and pharmacist" is appreciated by the West Virginia State Pharmaceutical Association and the honor of writing this paper is greatly appreciated by the writer.

The very first thing which came to my mind when I was notified of this privilege, was old Dr. Yates with the iron gray horse and two-bow buggy driving up to the large locust tree and hitch; this faithful old doctor brought three of us boys into this world and when I grew old enough to know him, his coming was of greater importance than the coming of anyone else, because it meant two distinct things to me; first, that my mother or brother was sick; second, I believed he could heal. My faith in him could not be shaken and I want you doctors to know that your coming today is just as important to mother, father, son or daughter as it was to me some forty years ago. There is no question but your coming to the home when some one of the family lay sick is the most significant of all visitors and this fact makes your profession, in the writers mind, the greatest of all, and for this reason the man who has chosen the practice of medicine as his profession should be well prepared in knowledge and must possess an abundance of good common sense.

Now any professional or business man is liable to become so engrossed in his own profession or business that he feels there is no other than his own and since the Medical Profession is of such high standard and is dealing with human lives, this profession requires more thought, greater study, longer hours than others; why it is probable that the doctor thinks less about outside business than other professions. May I go farther and say that unless he be very careful (since human lives are depending on him) he is liable to think other professions or businesses are wrong because he just gets a smattering of their real workings, and this leads me up to the subject of this paper, "Advantages to be gained by the co-operation of physicians and pharmacists."

Some one has said "co-operation is a fine thing as long as it don't cost anything" and while I am not inclined to believe this statement is 100 per cent true, I will say—here is one place where "co-operation cannot if properly conducted, cost either party anything but must be a source of revenue; however, I am of the opinion that "revenue" is not the outstandiing feature involved in this transaction.

Following the diagnosis of the ailment is the writing of the prescription and followiing this is the proper compounding of said prescription. It is my belief based upon investigation that a very large percentage, if not all the pharmacists are entirely honest in the matter of compounding a prescription, in fact, I have never had a pharmacist intimate that he did not compound a prescription as written. The reason I mention this is there seems to be an idea abroad among physicians and sometimes patients, that substitution is more or less general; as to who is to blame for this erroneous idea I do not know, however, I do know this, after twenty-five years of practical experience behind the prescription counter in towns varying in popu-

lation from four hundred to sixty thousand, that very often a patient comes in the store with a distinct idea as to what is in his prescription, how it should look and the price he should be charged. This condition of mind often leads to considerable trouble for the pharmacist because very ofteen preparations do not look just as they expected them to and the cost may be far greater than they think it should be. This brings us up to the manner in which prescriptions are priced.

The prescription department of a modern drug store carries the highest overhead of any department. The help in this department must be qualified not alone in pharmacy, but in chemistry, botany, materia medica and other branches. He must know incompatability, toxicology, etc., so that overdosage will not occur and he must also be able to compound a good appearing mixture of whatever the prescription may call for so as to be pleasing to the patient, making it as palatable as possible, and in addition to all this, he must be a courteous salesman, and in fact, a diplomat because a great many patients want to know exactly what each prescription contains, what will be its effects, and if it will cure, and they also want to know if the attendiing physician is a good one, what his charges should be, all of which require diplomacy of the real sort. Now, men, the prescription clerk has all these conditions to meet daily; is it any wonder that many of them are emaciated and sometimes a little grouchy?

The clerk who has taken a two to four year course in some recognized school of pharmacy and has spent two to four years additional serving an apprenticeship, should have, and does command, the largest salary, in addition to this, the prescribing physician's demands are large and variable. In the first place, he demands a large variety of chemicals as well as tinctures, fluid extracts, elixirs and other pharmaceuticals. The modern drug store must carry a large amount of biologics to meet the demands of today, to say nothing of proprietary preparations, some of these are copyrighted and carry a very high cost. All of these things must be considered in pricing your prescription; the actual cost of the prescription is not a fair basis to figure profit, for resale price, so doctor, when your patient asks you what a prescription will cost please be sure and figure all of the above named items, keeping in mind overhead, the general store expense, or please do not embarrass both of us by naming too low a price. Our prescription files show that forty per cent contained proprietary preparations which is certainly very large, the other sixty per cent being U. S. P. and N. F. preparations.

Now the writer has often heard the physicians say, the drug business is becoming commercialized. This topic in some respects is a trite one as so much has been written and spoken on this subject, but the ever changing aspect of the drug business is constantly bringing about changed conditions, and the ever widening scope of medication makes our problems of yesterday stern facts to be faced today, so that in consideration of the relation of pharmacists to physicians, we

must be constantly revising our creeds. The keynote of our work should be "service," and that service implies not alone service to the laity, for in order to serve the laity well we must at all times be prepared to give to the physician the prompt and effective means of accomplishing his work of healing. The customer is sometimes heard to say that pharmacy has become commercialized, but through my mind goes the thought that if such a charge has foundation it is because of a broken relation that was most unfortunate. I refer to the fact that when the physician took to dispensing the pharmacist in order to provide a compensation began casting about for side lines to sell and thereby enhance his profits in order to maintain an income sufficient for his daily wants. Sad to say, some pharmacists fell into the temptation to sell liquor, others went quite as far afield in reaching out for other lines; all of which was not to his, the pharmacist's, credit, but I only mention it in passing with the feeling that such errors come about most naturally when physicians and pharmacists are not in close co-operation. Now, confidence is the foundation stone on which this co-operation should, and must, be built, and confidence is a condition that must be fostered by honest methods, fair dealings, and strict adherence to fidelity and thoughtfulness in all our relations, both with doctor and patient.

Human life is the most precious of all possessions, and he who deals lightly with it is unworthy of patronage and should receive the condemnation of every honest man. When a doctor is summoned to prescribe in the home, his best efforts to effect a cure (and his effort must be honest because he has the confidence of that home) may be thwarted if his patient fails to receive the exact medication intended and the honest pharmacist will spare neither effort or money in procuring same, and at the earliest moment. Sometimes errors occur, due to the great strain the physician is laboring under during epidemics and periods of strain where his work piles up, causing him to lose most, if not all, the sleep and rest needed to keep him fit. These errors usually take the form of wrong losage or neglecting to specify amounts, and such things as naturally creep into prescription writing which we realize is often done amidst great confusion in the home, and wheen he is plied with questions, etc. In such cases the proper methods of a pharmacist to pursue is to get in touch with his physician promptly and quietly so as not to alarm the patient, for they are ever on the alert for any small error or irregularity, and it is necessary to maintain that peace of mind and implicit trust which should ever be the patient's regard to his doctor, and in this matter the pharmacist cannot be too careful, and should use the utmost care.

Ofttimes the physician wishes to use or prescribe a new remedy or preparation and the pharmacist should be willing to promptly obtain the same, and should use every effort at his command, but doctor, if you could peep behind the prescription case and see the large number of such preparations from which only a small portion was ever used, and in scores of cases

the package was never opened, and then realize that each one of these unused must raise the cost of medicine to your patient, I am of the opinion that you would be more careful in saying to all representatives of pharmaceutical houses, "Yes, you tell the druggist to stock this item or these iteems and I will prescribe it when I have occasion to use such a preparation." Far be it from me to question the honesty of reputable pharmaceutical houses, but if they would spend more time in perfecting the official preparations, and not give ninety per cent of their effort to proprietary and concoctions, all of us would be better off, even the patient.

It is my observation that the formula of these preparations are usually unknown to the doctor who prescribes them, in fact, are unknowable to the practitioner of any medical school, and therefore are hardly entitled to a large place in our consideration.

There is one more subject which I cannot refrain from bringing before your body, that is the sale of whiskey, wine and beer by the retail druggists. It is not my intention to discuss the merits of liquor, but I do wish to bring to your attention this fact. The retail druggists has labored under the laws made for the saloon for many years and it has been a stigma at all times and this question pricks to the very heart the honest druggist. The West Virginia State Pharmaceutical Association has been on record for more than fifteen years as being opposed to the sales of liquors in the retail stores and they have renewed this pledge from year to year; many other states have gone on record on this question and now it is proposed (whether true or not I do not know) that the medical men and in some cases the medical association, favor the sale of liquor in the retail drug store. May I ask you is it fair to ask the retail druggist to handle an article of questionable medicinal qualities, the prescribing of which is being carried on indiscriminately by some unscrupulous practitioners? If it is needed and is necessary as medicine, ask the government to dispense the same and not burden any business with its sale which is bound not only to lay a stigma on the business itself, but certainly on its own.

Lastly, let me plead for an honestly conceived relation of brotherhood between physician and pharmacist, as both are public servants, and both carry a great responsibility. Their duties in the matter of carrying out these responsibilities are so closely interwoven that anything which lessens co-operation between them deprives the public of what it has a right to demand (the best that is in us) and let me close with this: Service is not a way nor a means, but a result; may we work together and get results is my earnest desire.

Thanking you for this opportunity of speaking to you on this topic and extending a cordial invitation to you one and all to meet with our State Pharmaceutical at any of its sessions, I am yours for co-operation.

Secretary's Note: An excellent paper read to appreciative physicians. Discussed by Dr. Simpson, forty drugs would be enough for a

physician. Dr. Bloss, pharmacists are anxious to co-operate. Physicians do not know incompatabilities. We should not tell what prescriptions cost. Dr. Wise, the druggist should not say in selling a patent medicine that the doctors recommend it and the doctors should never recommend any patent medicine. Paper was also discussed by Drs. Steele, Reed, Hoffman, Page and Pharmacist Baer of Wheeling.

INSTRUCTIONS TO GONORRHEA PATIENTS.

By C. J. Broeman, M. D., Cincinnati, Ohio.

Of all diseases with which the medical profession must deal, none more than gonorrhea requires full co-operation between physician and patient in order to effect a cure. And of all diseases there is probably none where the physician has more difficulty in obtaining the patient's co-operation.

There are many reasons for this, chief among theme being perhaps, the small importance the laity usually attaches to a gonorrheal infection. "No more than a bad cold" is all too common a conception. Ignorance of its real seriousness, and failure to understand the dangers of communication to others; in the prevalent combination lies perhaps the greatest menace of this venereal disease.

The medical man who is obliged to handle a large number of gonorrhea cases will be greatly aided in his work if he provides himself with a set of instructions or regulations for patients which he can have typed or printed and hand to each one, as soon as the diagnosis has been positively established. Such a leaflet does not do away with the necessity of personal instruction to the patient; its purpose is to remind him of what the doctor said, and give him a definite standard against which his daily life and conduct may be checked up. In simple straight forward language he is told what to eat and to do, and far more important what he shall not eat and what he shall not do, if he expects to regain his health fully. The need of co-operation with his medical attendant is urged upon him, and he is warned against the wiles of quacks and the interference of well-meaning but ignorant friends.

The leaflet is printed in a convenient form so that it may be slipped into the pocket or concealed in a bill-fold, out of sight of others, but where the patient himself will be often in touch with it. This is far better than a large sheet or card, which is too big to be carried about unless folded in such a way that it is soon rendered illegible and destroyed.

The author has found the following form very useful in his venereal disease work, and offers it as a suggestion to those who have to deal with many of these patients.

Instructions to Those Suffering From Gonorrhea

(To be given to each patient on his first visit to the doctor's office.)

Gonorrhea is often called by other names, such as clap, drip, runnings, dose, woman's fever, strain or gleet (the chronic form). These are all used for the same condition.

What It Is:

This disease is not a simple matter, and it is not possible to have a "touch" or "slight attack" of it.

Diphtheria, pneumonia or typhoid fever may not attack one person so severely as they do someone else, but all the same they are serious and dangerous diseases. Gonorrhea rarely occurs except as the result of unlawful sexual intercourse. The first symptom is usually a burning pain in the penis on urination. This occurs usually three to seven days after being with a woman who has the disease. The urine at this time contains small fine flakes. After a day or more thick yellowish matter comes from the mouth of the urinary canal. Once the gonoccocus—the germ which causes gonorrhea—enters the body, it increases with incredible rapidity, and long after the discharge has stopped the gonoccocci may still be present, and cause a renewal of the trouble at any moment. Moreover, a "slight attack" may later develop into an extremely grave condition, or may be followed by the most serious after results.

Gonorrhea is an infectious communicable disease, easily given to other people, and if not promptly and thoroughly cured, liable to be the cause of lifelong discomfort or even invalidism. Some of these possible consequences of untreated gonorrhea are arthritis, a very painful swelling of the joints, lasting a long time, usually called rheumatism, which often results in permanent stiffness of the affected joints; eye troubles, more or less serious, but sometimes so severe as to cause blindness. Other local results of gonorrhea are stricture, a scar in the urinary canal, prostatitis, an inflammation of the prostatic gland; and infection of the testicles. The disease occasionally results in complete loss of sexual power.

Consult a Reputable Physician:

In order to avoid these unpleasant consequences it is very necessary for everyone infected with gonorrhea to seek treatment immediately and carry out faithfully all the doctor's instructions. Do not go to doctors who advertise, or make promises to cure you for a definite sum of money and make great claims of "privacy" and "secrecy." Put yourself in the hands of a reputable physician, for every properly educated man can treat this condition and has no need to promise infallible cure or perfect privacy, no other course being open to the honest doctor.

Remember that no one can cure you unless you are willing to help him. If you fail to follow his instructions and to do exactly as you are told down to the smallest detail no skill on the doctor's part will be of any use whatever. If you can see no reason for some of the things he tells you to do, ask him why, but do not take it upon yourself to omit or change anything. Do not consult with other persons who have been treated for the same disease, and perhaps try some of the things which have been prescribed for them. This is a very foolish practice, and is highly dangerous beside, as medicine or treatment very good for one person may be most injurious to another.

Dressings:

The utmost care must be used in dressing the affected parts. A "gonorrhea bag" may be used, but it must be kept clean and always supplied with fresh cotton. Do not put cotton over the mouth of the

penis, as this simply bottles up the discharge in the urethra, and throws the poison back into the body instead of allowing it to run out which is nature's attempt to effect a cure by getting rid of it. The proper dressing for an uncircumcised man is a square piece of gauze about seven or eight inches each way with a small round hole cut in the center. The penis is passed through this hole after the foreskin is drawn back until the glans is entirely through. The foreskin should then be pushed forward over the gauze and the glans. Such a dressing will take up all the discharge, but will not dam it back into the urethra, and the dressing should be changed often enough, three or four times a day—so that the clothing will not be soiled. In cases where a man has been circumcised, the hole should be made a little larger and the gauze passed over the penis to its base, where it can be pinned to the edge of a suspensory bandage.

A suspensory bandage, such as is used by the army and navy, must always be worn, and you must be sure that it fits properly.

Avoiding Infecting Others:

After removing a soiled dressing see to it that it is burned immediately, and does not carry the infection to anyone else. Be sure to wash the hands very thoroughly every time the penis is handled, for if the discharge is carried to the eyes it may cause blindness. See to it that no particle of the discharge is spattered about so that anyone else can reach it. If you touch a door handle with your unwashed hand or soiled bandage the next person who turns that handle may carry the infection to his eyes, and become blind because of your carelessness. When you use a bath tub, be sure that you leave it perfectly clean and wiped dry. It is better not to use tubs or bowls which must also serve for others. Never let flies touch the secretions.

Sleep alone if it is any way possible, but if not, always lie on the same side of the bed, and be sure that you do not infect your companion. Keep your towels and wash cloths carefully out of the way of everyone else, and never use a common towel or cloth.

Food and Exercise.

The diseased parts will be injured and the condition made worse if the urine contains alcohol or highly-spiced substances. Therefore do not drink alcoholic liquors of any sort. For the same reason do not drink spiced or carbonated "soft" drinks, like ginger ale, or eat highly spiced and peppery food, frankfurters or pickles. Some meat may be eaten but you should mostly confine yourself to bread and toast, fish, milk, eggs, fresh vegetables, except asparagus—and the other food which the doctor may think good for you.

Drink plenty of water as this dilutes the urine and helps to wash out the discharge. Drink as much as you possibly can during the day but stop three or four hours before bedtime so your rest will not be broken by the necessity of getting up to pass urine.

Be sure the bowels move at least once a day. If they do not a saline laxative must be used in hot water before breakfast or any other medicine the physician recommends.

Avoid all violent exertion or ex-

ercise, such as running, bicycling, and especially dancing. Walk and stand as little as possible. It is not usually necessary for a man to give up his regular work, even for a short time, but he should keep as quiet as he can, rest after his day's work is over, and go to bed at a reasonable hour.

Sexual Relations:

Never have sexual intercourse until the physician pronounces you cured. It is quite possible to give the disease to a woman after the discharge has stopped flowing, and moreover, erection of the penis always aggravates the disease.

Avoid the company of women as much as possible, for sexual excitement always increases a gonorrhea infection, and kissing or contact usually causes erection, and may result in serious complications. This is often not fully understood by sufferers from this disease and should be especially emphasized.

Chordee must be treated by wrapping cold wet cloths about the penis, and voiding the urine as soon as the erection goes down. Do not force it down, as the penis may be ruputred by so doing. Sometimes a chordee may be stopped in the beginning by seizing the thighs high up inside and pinching them as hard as you can.

Continuous Treatment:

Visit the doctor frequently, three times a week at least, take whatever medicine he gives you regularly and use the injection exactly as he shows you. Never use a piston hard rubber syrings—always a glass one with rubber bulb, so it can be boiled. Go without voiding the urine as long as possible, before going to the doctor so that you will be able to void it in his presence. It will tell your story far better than you can.

As long as there are many shreds or "floaters" in your urine, or if urine is continually cloudy, or if there is any discharge during the day or early in the morning you are not cured.

It will be necessary for the doctor to make a number of microscopic examinations of the prostatic fluid after he has passed a sound, or given you an irrigation of silver nitrate before he will be justified in telling you that you are entirely well. Sometimes if your case has been an unusually severe one, he will be obliged to make some blood tests in addition to the microscopic examinations.—4 W. 7th St.

THIRTY YEARS OF OBSTETRICS

Read Before the Barbour-Randolph-Tucker County Medical Society, July, 1921.

By Dr. E. F. Moore, Davis, W. Va.

Thirty years of Obstetrics means, of course thirty years of active general practice, with obstetrics merely an incidental part of the whole. I have kept a complete record of all my cases, and while statistics and records are usually very dry reading, I find my records interesting principally because they differ so radically from the averages and per cents recorded in the books.

Before coming to Davis four years ago, I had assisted at the birth of 1237 babies at full term, or nearly so, those born before the seventh month not counted. Of this number 809 were boys and 428 were girls. There were five pairs

of twins, two pairs being crossed sex, two pairs girls and one pair boys. Three pairs were from primiparous mothers. Two cases of placenta previa, one at full term and one at five months. Both mothers primiparous. Saved both mothers and lost both babies. In the case occurring at full time there was a shoulder presentation, arm extended.

Four face presentations of which two were converted and two were delivered by verson. Eleven breech presentations. Three transverse presentations, including the shoulder above mentioned. One brow and one footling presentation. One delivery with bag of waters unruptured, being the second of a pair of twins. Three cases of adherent placenta. Two cases of eclampsia, one both ante and post partum and one post-partum. Saved both mothers and both babies. Both mothers were primipara.

Have applied forceps fifty-seven times and have performed craniotomy three times, once without professional help. One case due to deformed pelvis and other cases due to large size of the foetus. In one case the foetus weighed twelve pounds and in the other weighed fourten pounds.

My youngest patient was thirteen years ten months old and was my first case of eclampsia. Saved both mother and child.

Saw, in consultation, a girl just past her eleventh birthday, who was five months pregnant. Doctor in charge of the case wanted to produce miscarriage and deliver at once. I advised watchful waiting for the present and that the patient be taken to a hospital soon after the seventh month and a Caesarian section be performed when labor was imminent. My advice was not followed, other council obtained, labor was induced and the girl died undelivered.

My oldest patient was past fifty-two and was delivered of her thirteenth living child. Most protracted labor (due to contracted pelvis) was seventy-two hours. Shortest labor twenty mintues, being the woman mentioned above as my oldest patient.

During the past twenty years I have given chloroform to every patient who would take it, frequently in the first stage where dilation was slow, and have failed to note that tendency to post partum hemorhage some of our text books speak of after chloroform. I never saw a severe case of post-partum hemorrhage in all my experience.

During the past twenty years I have made it a practcie to dilate and retract the foreskin on all my male babies directing the nurse to retract the foreskin and wash the glans every day. Where the foreskin is unusually tight I clip a good sied nick on the dorsal surface.

In primipara, if dilation is not complete after four hours of fairly good pains, I give a hypo of morphine large enough to put the patient to sleep.

The old time text books taught that the tincture or infusion of lobelia, given by mouth to the point of nausea was a sovereign remedy for rigid os. I have never gotten results with the remedy. When performing digital dilation I have found that cocaine, either in an inunction of lanolin or in 10 per cent watery solution on gauze, aids ma-

terially and lessens the pain very much.

Quinine will not induce labor pains, but in my hands has never failed to convert feeble pains into vigorous pains. I gave fifteen grains of the bisulphate.

I was taught when a student that certain classes of our own people (notably farmers' wives) and most foreign women of the lower order had practically no trouble at childbirth. This I have found to be fallacious, as well as much other knowledge I acquired while a student. I have delivered women of almost every race, including Mexicans, Navajo Indians and the idle rich and have found that none are immune to the haps and mishaps of childbirth. "The trail of the serpent is over all."

Pope, in his "Essay on Criticism," says: "Be not the first by whom the new is tried, nor yet the last to lay the old aside." If this advice was followed there would be no progress along any line of human endeavor. In the ranks of our profession we have three classes of men—one class being always extravagant in the praise of any and all things new; another class who can see no virtue in anything that is not well covered with moss and whiskers, and a third class who believe in the divine injunction: "Prove all things, hold fast that which is good." Progress must be agnostic. To accept results without questioning causes, would deliver humanity to bigotry and fatalism. Today Einstein sticks the fool's cap on Newton, and tomorrow a shrewder brain will in turn demolish the whole theory of relativity, all of which reminds me that in the Journal of the American Medical Association, May 21, 1921, there is a lengthy article bristling with statistics, parallel tables and percents, calling attention to the fact that our new friend Pituitrin has two very sharp cutting edges and is in fact a doubtful blessing in obstetrics. I presume that you have all read the article, so I will not quote any part of it.

Also in "The Medical World," Cincinnati, for the past several months, a hot war has been raging over the use and abuse of rubber gloves in obstetrics and over the substitution of the rectal for the vaginal examination.

A prominent Chicago physician claims that puerperal infection is not due to the examining finger, but to causes arising from the antepartum condition of the patient, and that if elimination was kept at par during the last two months, puerperal septicaemia would be unknown.

I want to confess in closing this paper that I have never attempted to diagnose a presentation through the rectum—that before coming to Davis I never used rubber gloves—that now, after four years of strenuous trying, I still find them more or less of a handicap when using the forceps or doing a version — and that while I have no prejudice I have never used Pituitrin, preferring to wait a while or use the forceps and that my sole object in choosing the subject of obstetrics for this paper was to provoke if possible, a discussion of these moot questions.

The personal experience of men like Dr. Butt or Dr. Miller, or other members of this society whom I

know and in whom I have confidence, would have more weight with me than all the statistics available in printed form.

A CLINICAL STUDY OF ECTOPIC GESTATION

Read Before the Surgical Section of West Virginia Medical Assn., Charleston, May, 1921.

By R. H. Walker, M. D., Charleston, W. Va.

Ectopic gestation is pregnancy occurring outside the uterine cavity. This many physicians believe to be a rare condition and few cases are diagnosed until rupture or several weeks after rupture. Again, many physicians do not understand it because they have failed to make a proper examination. This is sheer neglect and a reproach to the standing of our profession. The life of the patient often depends on early diagnosis and prompt institution of operative interference.

Kocher said, "A physician may not be required to act surgically, but he must be able to think surgically." This is distinctly a grave surgical condition and surgical thought and action are imperative if we are to save the lives of our patients.

It is needless to enter a scientific discussion of the etiology of this condition. It is enough to say anything that interferes with the normal progress of the fertilized ovum to the uterine cavity, predisposes to ectopic gestation and later becomes the actual cause of same. It was first clinically recognized by Abulcasis, an Arabian physician in the year 1110 A. D. And again later by Riolan in 1826. John Parry in 1876 published the first intelligent treatise on this subject, yet it is fortunate that the first operation was delayed until 1883, because those who did survive would probably have died of sepsis if they had been subjected to an operation.

Lawson Tait was the first to take the initial advance by treating it surgically. It marked a great epoch in the development of pelvic surgery. At present it comprises from five to six per cent of all gynecological operations. A history of the menstrual life of the patient carefully taken is the most important factor in making a diagnosis. History of pelvic infection, the length of sterility, and age of the patient are all important.

De Lee says: "If any woman, in the reproductive period who runs over her usual time or has some irregularity in her menses, either a small amount or more profuse, has cramp like pains in her lower abdomen mostly unilateral with irregular uterine hemorrhages, one should think of ectopic gestation."

Symptoms before rupture; the patient goes over her time to menstruate for a few days to a few weeks, other subjective symptoms are usually present. Later cramp-like unilateral pains develop which occur periodically and are often referred down the thigh on the side affected. Backache, constipation and irritability of bladder are likely to develope. Slight irregular uterine hemorrage with discharge of decidua. The hemorrhage may be slight or profuse. The physical signs are as follows: Soft cervix, uterus somewhat enlarged and if the affected tube is palpable, it will be found enlarged and very tender.

Time of rupture is usually from five to seven weeks, practically always before the twelfth week. There is a history of sudden severe pain mostly unilateral and attended with profound shock, rapid, weak pulse, cold perspiration, blanched skin, sighing respiration and fall of temperature. Pain need not always be present.

Physical Signs

The abdomen is distended and tender, cervix soft, uterus enlarged and painful to touch. Previous to clotting no mass will be found unless the rupture has taken place between the folds of the broad ligament. After haematoma formation there is a large painful mass in the pelvis, displacing the uterus upward and forward behind the pubic bones. The uterus is rarely displaced backward and when it is pushed back the displacement is due to adhesions holding it in that position.

Differential Diagnosis

Like all pelvic or abdominal conditions we must differentiate between conditions causing similar symptoms. It is more frequently mistaken for salpingitis and pyosalpynx than anything else. Next in order is appendicitis, endometritis, fibroids, normal pregnancy, abortion and renal colic. A careful study of the menstrual history of the patient and of physical signs will usually eliminate the above conditions. After rupture there should be no difficulty in the recognition of it. The history of irregular menstruation and subjective symptoms of pregnancy with characteristic pain and collapse are pathognomonic. Later the development of the mass in the pelvis which is tender to touch. Appearance of jaundice is held by Norris to be of diagnostic importance. Jaundice has been observed in all of my cases of extra uterine pregnancy of a few weeks duration.

Prognosis

Patients who are treated surgically have a mortality of five per cent. Patients who are not treated surgically have a mortality of sixty-six per cent.

Treatment

Previous to rupture, the proper treatment is a surgical operation which removes the affected tube and ovum. Transplantation of ovum to uterim cavity has been done with success but is not to be recommended. At time of rupture the proper treatment is immediate surgery without waiting for recovery from shock, because the continued loss of blood may prove fatal and reaction will not take place until hemorrhage is controlled. Simultaneously with the operation normal salt solution should be given intravenously or transfusion of blood if proper donor be present and conditions indicated. Patients own blood may be utilized for transfusion. The question of resection of opposite tube is debatable and must be governed by condition of tube and patient. Under no circumstances should it be resected or removed if normal.

Treatment During the Course of Abdominal Pregnancy

Delay is not justifiable; operations should be undertaken without regard to the viability of the foetus. If the placenta is dead, it is usually very easy to remove but if it is alive, it is very difficult and dangerous. It should be removed

if possible in all cases if it can not be removed the margins of the sac should be brought out of the abdomen and stitched to the margins of the incision and wait for the separation. This treatment of the placenta is dangerous because it is likely to become infected and cause peritonitis.

Report of Cases

Case No. 1

Mrs. F., age 41, who was the mother of three children, youngest seventeen years of age, had no infection, no miscarriages, went over her last menstrual period three weeks and then began to have slight irregular uterine hemorrhages, associated with pain in left side of pelvis which continued at intervals for three weeks. Suddenly she was seized with a severe pain in left side of pelvis and collapsed. A physician was not called until one week later. At that time she was suffering with pain in lower part of abdomen, chills, fever and sweats. On examination the abdomen was very tender and painful and she was jaundiced. There was a large tender mass in the plevis which displaced the uterus up behind pubic bones. A diagnosis of extra uterine pregnancy was made.

Operative Findings

February 3, 1917, the pelvis and lower part of abdomen contained a large amount of clotted blood which was decomposing itself; free pus was present. Left tube and ovary destroyed by development and rupture of the ovum. The tube was so badly destroyed it could not be ascertained whether absorption or rupture had taken place. The affected tube and ovum removed and abdomen drained. Patient recovered but later developed a vetral hernia.

Case No. 2

Mrs. B., aged 36, had three children, the youngest was five years of age, but had no infections or miscarriages. Menses ceased two months before I began treating her, other subjective symptoms of pregnancy were present at this time; she began to waste slightly at intervals of a few days, and developed uneasy aching and bearing down pains in right side of pelvis. After ten days of such symptoms, she became actually ill and was seized with a severe pain in right side and had all the classical signs and symptoms of internal hemorrhage. Diagnosis of ruptured extra-uterine pregnancy was made.

Operative Findings August 4, 1917

Right tube ruptured, foetus expelled into peritoneal cavity, abdomen full of blood. Right tube removed, and Mrs. B. was given salt solution during operation. Recovered and is now a healthy woman.

Case No. 3

Mrs. H., age 32, had three children, youngest of which was three years old, had menses, 28 day type. Menses ceased and she had all symptoms of normal pregnancy up to seventh week, when she was suddenly seized with a severe pain on left side of pelvis. She fainted and was confined to bed for several days. At the beginning of the twelfth week she had the second attack, a physician was called and diagnosed left renal colic. He prescribed morphine and kept patient in bed for a few days. About the sixteenth week she had a more severe attack than ever and collapsed. She had all signs and

symptoms of internal hemorrhage. She was admitted to a hospital November 6, 1917, a diagnosis of ruptured extra uterine pregnancy was made. The patient was in a critical condition. Normal salt solution was administered intravenously.

The abdomen was opened and found to be full of fresh blood. A well formed four month baby was delivered. The placenta which had been attached to left side of pelvis and extending up to splenic flexure was already detached and came away with the baby. Mrs. H., died on the operating table from loss of blood. A diagnosis should have been made at the time of rupture nine weeks previous.

Case 4.

Mrs. W., aged 38, who had three children, the youngest of which was ten years of age, puerpural infection at time of last child-birth. At her usual time to come unwell, she begun to waste more than normal and to have paroxysmal attacks of pain in left side of pelvis, radiating down the left thigh. This condition continued for three weeks before she consulted a physician who made a diagnosis of extra uterine pregnancy and sent the the patient to the hospital. She was admitted to the hospital April 15, 1919, and as she was being assisted to bed she was seized with an agonizing pain in left side of pelvis. She was anesthetized in bed and taken to the surgery. The abdomen was opened, the left tube was found ruptured and bleeding freely. The tube and remnants of the ovum was removed. Patient made a normal recovery.

Case 5.

Mrs. H. R., age 34, had four children, youngest eighteen months, but had no infections nor miscarriages, missed last two periods, and had subjective symptoms of pregnancy. June 30th, slight uterine hemorrhage, paroxysmal attacks of pain in right side of abdomen which suddenly became severe and patient collapsed. In examination patient is anemic, pulse 150, blood pressure 90, faint and thirsty, pupils dilated, abdomen was distended, tender and painful to touch. Large, soft mass in pelvis. The patient was twelve miles from a hospital, four hours before a train could take her to the hospital, was in a critical condition and it was thought best to operate in her home instead of subjecting her to delay in transportation and the possibility of aggravating the hemorrhage.

Operative Findings

Her abdomen was full of uncoagulated blood; the right tube was ruptured, the tube and ovary were clamped off and removed, blood clots removed from the abdomen, salt solution was given intravenously. Her recovery was normal in every respect.

Case No. 6

Mrs. H., who was thirty years of age, had been married twelve years acquired gonorrheal infection at time of marriage, no pregnancies, went two months over her usual time to come unwell, had subjective symptoms of pregnancy and was pleased to think she was pregnant. Suddenly, without warning, she was stricken with an agonizing pain in abdomen. She became faint and collapsed. She was at once diagnosed as ruptured extra-uter-

ine pregnancy and was sent to the hospital.

Operative Findings

A large amount of fresh blood in the abdominal cavity, right tubal abortion, foetus expelled, with the placenta still adherent to tube.

Case No. 7

Mrs. J., who was aged thirty-two years and had five children, youngest three years of age, had no miscarriages or infections, normal menstrual period, the twenty-fifth of February. She went over period one week and began to have colicy pains in pelvis with backache, slight irregular uterine hemorrhage. On March tenth she went to get over a fence and was seized with a severe pain in right side of abdomen. She became faint, cold perspiration came over her body; she was assisted to bed and hot applications applied to abdomen. She improved and a few days later called a physician who is not legally qualified physician, yet he is tolerated by our State Council and the medical profession. This man told the woman that her womb was out of place and that he could adjust it and effect a cure. She gradually became worse and on March 20th called a regular physician who diagnosed the condition and sent her to a hospital for treatment. Examination showed her to be anemic, pulse 120, blood pressure 90, jaundice present, abdomen distended and tender, large mass in pelvis, uterus displaced upward behind the pubic bone.

Operative Findings

Large amount of dark fluid blood, and an equal amount of old clotted blood found in abdomen and pelvis. The right tube was destroyed.

Case No. 8

Mrs. B., who was 38 years of age, had pelvic infection eight years previous, had been married six years and has never been pregnant. March 25 she went over her usual period and had subjective symptoms of pregnancy. She had a severe pain in lower right side, and she collapsed; had cold perspiration over her body and was thirsty Morphine was given and patient was placed in bed. Gradually improved and was able to arise and move about the house. She was referred to me on May 28, without a diagnosis. Her lower abdomen was distended and painful to touch. Large mass was in pelvis, displacing uterus up and forward behind pubic bones, jaundice was present. Diagnosis showed extra-uterine pregnancy. Pelvis was full of dark clotted blood, which was decomposing and there was a very foul odor. Right tube and ovary brought up and was found destroyed by the rupture. Right tube and ovary removed, abdomen drained. Patient made a nice recovery.

Case No. 9

Mrs. M. B., who was aged 36, had pelvic infection since marriage fifteen years ago. July 10 her normal time for menses was delayed for one week, she had slight aches and pains in pelvis and back, which gradually became worse and later was suddenly seized with a severe colicky pain in abdomen, cold perspiration was extant and she became weak and collapsed. The family physician was called and she was given morphine but no diagnosis

was made. These attacks re-occurred at intervals of a few days for eight weeks. She became jaundiced and was admitted to hospital October 4, 1920. Examination was made, skin found to be yellow, her face pale and haggard, abdomen distended and tender. Large painful mass in pelvis, uterus displaced upward behind the pubic bone. Diagnosis of old ruptured extra uterine pregnancy was made.

Operative Findings

Blood clot extended up to umbilicus, and was walled off by the intestines and omentum. The right tube and ovary were destroyed, the left tube was affected, both tubes and right ovary removed and patient has made a nice recovery.

Case No. 10

Mrs. F., who was 35 years of age, had five children, youngest of which was five years of age, but had no miscarriages, no infections. Menses irregular for last three periods. She went over her time to come unwell ten days and then only spotted a napkin for two days. Second month her condition was the same. Third period she was seized with pain in lower right side, which re-occurred at intervals of sveeral days. There were slight irregular uterine hemorrhages, she became jaundiced. Examination showed abdomen distended and painful to touch, pelvis filled with a large tender mass, uterus displaced upward behind the pubic bones; diagnosis of extra uterine pregnancy was made.

Operative Findings

Showed rupture of right tube, large blood clot in pelvis, marked adhesions, right tube and ovary removed.

Case No. 11

Mrs. J., who was 28 years of age and had three children, youngest of which was three years old. Had no miscarriages and no infections. Went over her last menstrual period three weeks. While waiting on customers in a grocery store she was suddenly seized and had severe pain in the right side of pelvis. She collapsed and was put to bed. I saw her thirty minutes later and she had all signs and symptoms of internal hemorrhage. Abdomen was very painful to touch; slight uterine hemorrhage. Diagnosis, ruptured extra uterine pregnancy.

Operative Findings

Rupture of right tube, large amount of fresh blood in pelvis, about six week foetus was found and removed, right tube was removed.

Conclusions

1. This is not such a rare condition as many physicians think.
2. The importance of this subject is not emphasized by text books and clinicians.
3. Closer relation between patient and physician will result in more cases being diagnosed.
4. The most important factor in diagnosis is the menstrual history.
5. The proper treatment of ectopic pregnancy is surgical.

Dr. Chas. F. Hicks, for eighteen years superintendent and surgeon of the Welch Hospital, has retired from that institution and has located in Huntington for the practice of his profession. Dr. Hicks is proficient in both surgery and medicine. In addition to his professional success at the Welch Hospital, Dr. Hicks made an enviable record as an executive.

Announcements and Communications

To the Editor of the West Virginia State Medical Journal:

At our state meeting last year I read a paper on the Prevention and Treatment of Simple Goitre. It had been shown by our examination here in Charleston in the various schools that we had a large number of simple goitres among the children, especially among the girls. After investigation it was found that this prevailed throughout the whole of the Great Lakes Basin and was not confined to this particular locality. I had been interested in the good work of Marine & Kimball in Akron, Ohio, their work consisting of giving sodium iodide twice a year for ten consecutive days to all the girls of the Akron schools. In my paper of last year I was unable to give any very definite results as we had only given the iodide for two periods. I wish now to make a report which I think is of some interest.

When we examined the cases in 1920, 21, 22, the following is what we found:

	Examined	Without	Small	Moderate	Large	No. With	Per Ct. With
1920	2343	911	830	537	65	1432	61.1
1921	2465	1034	989	403	39	1431	58.0
1922	3846	2966	812	61	7	880	22.8

You will note that the total number of goitres has been reduced from 61.1 per cent to 22.8 per cent. you will also note that the reduction has not only been in the cases that had the very small goitres, but the medium size and the large goitres have been markedly decreased.

I am writing the above with the hope that you will publish this, as I feel that every community with much goitre should give this treatment to its children. I believe that if this is continued as at the present time that in a few years we can practically abolish all cases of simple goitre.

JOHN W. MOORE.

Editor West Virginia Medical Jour.

I have read with interest the several notes in your last issue touching the County Medical Society. Fifty years of membership in medical associations have served to give me some pronounced views touching the lack of interest too often shown, especially in those societies whose membership is drawn from the smaller towns and the country. The excuse sometimes given, "I am too busy," can generally be discounted. While it may be true in exceptional cases, my observation is that the most busy men are almost always the most regular in attendance at medical meetings.

Two chief reasons for the frequent small attendance at these meetings are: 1. The uncertainty of an interesting program. 2. The tardiness in opening the exercises. A physician is not stimulated to ride from four to eight miles to a medical meeting unless he has reasonable assurance that he will not have to lose valuable time in waiting the arrival of the tardy members. Nor is he apt to exert himself to attend meetings when the program of his society fails to materialize nearly half the time. To maintain a live society with a good attendance therefore, a good program must be assured, and the meeting must begin at the fixed

hour. I would suggest that the quorum be made small and that the minute a quorum is present the meeting be called to order. The late comer will soon learn that something is lost by his tardiness and will mend his ways and if the president adheres strictly to a determination to begin on time, there will soon be few tardy ones.

I sometimes have a feeling that some members fail to attend medical meetings because they feel that they can not express themselves well in discussions. The really good talkers in any body are always in the minority, but no intelligent physician need hesitate to express his views or relate his experience in a discussion because his words do not flow as readily and smoothly as do those of a few of his fellow members. It is not the wordy talker who is the most interesting, but rather the man who can in the briefest time clearly express his ideas and then take his seat. One of the best informed of Wheeling's former practitioners, and one of the most busy, almost never missed the county society meetings, and yet he rarely arose to engage in a discussion, although frequently giving expression to his views in emphatic language from his seat.

Briefly, therefore, I would urge:

First, that a good program be assured and not be left to uncertainty.

Second, that the meeting be opened as soon as a quorum is present.

Third, that no member be permitted to make a second speech on any subject until all others have had an opportunity to express their views.

Respectfully,
S. L. Jepson.

The starving condition of Russian doctors in the famine areas, where their help is badly needed, is seriously interfering with a vitally important medical program drawn up by the American Relief Administration officials for the benefit of the hunger stricken population. Cholera, typhus, malaria, dysentery and other skin and stomach diseases consequent on malnutrition, are rampant, all through the Volga river basin where thirty million people are in acute need, if not in danger, due to the failure of last summer's crop. An absolute dearth of medical supplies at first hampered the work of the American Relief Administration, but a grant of $3,000,000 in cash from the American Red Cross for the purchase of stocks, as well as a further gift of $700,000 worth of surplus material made, eliminated this difficulty. Now the call is for personnel which Russia herself can supply, if only food enough can be found to keep the workers themselves fit.

"We urge consideration of the possibility of securing general relief in the form of food remittances for doctors," the American Relief Administration cabled recently from Moscow. "This is one of the most urgent needs to assist the general Russian situation. We can only secure the best results for our large and vitally important medical program by using to the maximum extent the Russian doctors whose condition especially in the

famine areas is desperate. Telegraphic advice of general relief donations for this purpose to make it as far-reaching effective as soon as possible would have wonderful results. I don't know of any greater service that our contributors could do than come through right now with generous donations for this purpose."

These food remittances which can be bought at the American Relief Administration offices, 4 2 Broadway, N. Y., call for the delivery to designated individuals in Russia of packages, each costing $10, containing 117 pounds of nourishing food. This includes flour, rice, cocoa, sugar, cooking fat, tea and condensed milk, sufficient in each package to keep an adult well fed for one month. Should the donor in America not know of any individual to whom he or she wishes to send such a gift, the remittance can be made payable to general relief, the beneficiary to be chosen by the A. R. A. after personal investigation of his needs.

Already the Jewish Joint Distribution Committee in reply to the A. R. A. appeal on behalf of doctors, has appropriated $25,000 to be spent on remittances for their relief.

Dr. Adrian H. Grigg spent several days recently in Philadelphia on business.

Dr. E. S. Dupuy of Beckley, spent several days recently in Virginia on a hunting trip—later going to Washington.

Dr. Charles S. Smith of Beckley, spent several days recently in New York on business.

Dr. B. B. Richmond of Cranberry, has been ill for some time but is recovering nicely.

Dr. I. M. Fisher of Stotesbury, spent Thanksgiving in Charleston with friends.

Dr. Charles S. Smith spent the Christmas holidays in Georgia with his parents.

Dr. M. V. Ziegler of Charleston, a representative of the United States Public Health Service, addressed the Rotary Club and Raleigh County Medical Society November 9 on the value of having a full time public health unit in Raleigh County. Dr. Ziegler spent several days in the county investigating the typhoid epidemic at Affinity.

Dr. B. W. Eakin of Tams, was a visitor in Beckley recently.

An unidentified gunman recently made an attempt to take the life of Dr. Linday T. Vinson, former county coroner and a lifelong resident of Huntington, when five revolver shots were fired at him through a window at his residence, 1342 Sixth avenue. Dr. Vinson, reading a magazine, in the library of his residence, had the narrowest possible escape from death. One bullet tore through his left coat sleeve, another knocked the magazine out of his hand, two went through his overcoat and the fifth was found in a feather pillow lying on a davenport in direct line with the doctor. The shooting occurred at 9:45 o'clock and within a few minutes police with bloodhounds arrvied on the scene in an effort to trace the man who did the shooting.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS, M.D., Editor.
C. R. ENSLOW, M.D.
J. E. RADER, M.D. Assistant Editors.

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

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Should be made by check, draft, money order, express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

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FOURTH DISTRICT: J. E. Rader, Huntington, one-year term; G. D. Jeffers, Parkersburg, two-year term.

FIFTH DISTRICT: One-year term, to be filled; H. G. Steele, Bluefield, two-year term.

SIXTH DISTRICT: J. W. Moore, Charleston, one-year term; R. H. Dunn, Charleston, two-year term.

AN EXPLANATION

The dates of issue for the past year have certainly been of more or less uncertainty. During the trouble of the publishers with the printers our Journal got several issues behind during the past Spring and Summer. Just about the time it looked as if we were going to get caught up again it became necessary to call for bids on the printing of the Journal for the coming year. The result of this is that we will have another printer doing our work and as there has been some delay in arrangements the issues have gotten behind again.

We have hopes that soon we will be back on our old schedule and that things will move smoothly again.

A GREAT SOCIOLOGICAL TRIPARTITE

The Hospital Superintendent and Staff.

A hospital is an institution in which the sick or injured are given medical or surgical aid, a repair shop where the most vital product

of God's creative genius is carefully gone over, checked up on and if possible made ready for renewed service in the vast and tremendous battle of life.

With such a comprehension of hospitals in mind, if they are to fully measure up to the position they occupy in the human scheme and plan of life, there are certain things necessary ere they can render a full meed of service. Money can buy a suitable location, constructive forces erect buildings, purchasing committees fully equip such institutions, but this is not all. When completed, spick and span, fresh of paint and varnish, clean of linen and giving every evidence of wise investment in the markets of the world of all the latest and best in the domain of equipment, they are yet not capable of rendering service. They are then much like powerful locomotives without water in their boilers or fire in their fire boxes, or engineers at the throttles. To all that public spiritedness, philanthrophy, or economic farsightedness may do for a hospital must be added the power plant and the power controller. The one is the superintendent, the other the staff. Between these two forces there must be that unity of mental, moral and physical forces absolutely essential to the success of any human undertaking

With a superintendent whose brain, heart and soul are forever alive to the interests of God's unfortunate, ever struggling, ever planning for big and mighty things, throwing the charm of her personality over the entire plant, greeting visitors whose pilgrimage is prompted by love, devotion to and interest in those who fill wards and demand service as they fight grim battles against forces seen and unseen that they may "come back"; winning service and work at the hands of each one associated with her by the wonderful work she herself does rather than by acrimonious criticism and constant aloofness from nurse and attendant; with such a head of an institution success is half won, and throughout every ward, corridor and chartroom there pervades an atmosphere of love, mercy and devotion to a noble calling such as must have hung over the pool of Siloam whose waters of fabled potency, Divine Angels are said to have periodically stirred that physical regeneration might take place.

The staff must stand for all that is best and most refined in such human endeavor. Each member should be brave and study to be competent and yet tender and big of heart and considerate of the weakness and frailities of mankind. Every minute of his time and at every step the physician should be mindful of the psychology of pathology as well as the pathology of tissue in his multiform battle. To be a surgeon or an internist in this day and age of the world is a mighty undertaking, and the world demands at the hands of the profession larger and yet larger service as science and unlimited means unfold and make easy of use and application forces and factors hitherto a sealed book. The terms Hospital, Superintendent and Staff intiutively causes the great mass of human beings to visualize safety, protection, sympathy and success. May their faith be not shattered.

May we of the profession whose lines have been so charted as to be associated with eleemosynary institutions get a greater comprehension of the parts we play, not only as medical men, but as leaders in the world's great onward march toward physical, moral and social improvement, and thus at all times be ready and fully competent to meet such conditions and requirements as are necessary to final and complete success. —J. B. T.

THE PROBLEM OF THE CRIPPLED CHILD

There is an appalling number of crippled children in the state. Some young, while others will soon be coming into womanhood and manhood, physically disabled and entering the useful period of life with a great handicap. These cases are practically all keen and alert. Many have brilliant minds; so active in fact, that they excel in the mental problems of life and if guided into the proper channel of activity, or given the desired vocational training, will become an asset to the country. If neglected, they become a care and ofttimes a menace to the country. On account of their physical deformity, they feel very keenly their social handicap, and if the proper interest and attention is not given at the right time, their cunning if often misdirected, and they become—and a certain percentage of them do become—the cleverest criminals in the juvenile courts.

There is not a single institution in the state to care for these cases, such as congenital deformities and anomalies; club feet, knock knees, tubercular spines, tubercular hips, tubercular legs, malunited fractures, healed diseased lesions of bones with deformities, spinal injuries, scoliosis, infantile paralysis, rickets, supplying, fitting and training for artificial limbs, postural defects and such deformities.

This is one of the few states in the United States which has not such an institution. We have large institutions and hospitals for the insane and feeble minded; orphans; hospital space for the usual routine surgical and medical care; but nowhere is there a place to care for the problems of the crippled child, or for the reclaiming of the physically handicapped. Many of these deformities can be entirely corrected without a trace left for the stigma of the adult mind. Many can be taken from their beds in wheel chairs and put into open and outdoor life, and practically all can be improved to the degree of usefulness.

Such a hospital would be the truest form of charity, and far-reaching in its effects. The results would be felt into the deepest ramifications of all planes of society, for there is no walk of life exempt from these deformities.

The most intellectual and well-to-do would be assured of the very best possible treatment to be had in the country, while to the poorer classes it would mean the saving of lives and the reclaiming of hopeless cripples from the state of dependency and ignorant pauperism. Remember that every human being who is a cripple and pauper is a burden to the community, and is directly a burden to the state. We can reclaim these little cripples and can give them strength, symmetry,

function, poise, assurance, education, a vocation, and enable them to become self-respecting and useful citizens.

What we need is a good, active well-staffed hospital for the correction of these deformities, with an adjunct staff for educational and occupational therapy, and a visiting nurse's association arranging for the bringing the child to the hospital and the obtaining of suitable positions at the completion of their treatment. Such an institution would receive a warm welcome by the medical profession as a whole. It would lessen the burdens of the family physician, who can be rightfully called the god father and adviser of the family. It would mean co-operation. It would mean efficiency, and another demonstration to the laity of the advancement of medical and surgical science. —A. S. J.

A PRESSING NEED

While the dawn of nineteen twenty-two is in some respects more gloomy than any since that of the last year of the great war, the horizon is not an unmixed leaden cloud. Here and there are seen rays of sunshine and areas of "silver lining." Not the least of the bright spots is the gradual decrease in the mortality rate from tuberculosis. The great white plague is at last beginning to show signs of loosening its death grip on mankind.

However, the incidence of active tuberculosis averages approximately two per cent of the total population and the decrease in deaths is due to the increase in the number of patients treated in sanatoria. Those of us who have followed the excellent work of Dr. Clovis at Hopemont, cannot help but be impressed with the fact that the sanatorium is pre-eminently the treatment of tuberculosis, and that the essential factors in recovery are rest, diet and education—what we might call "tubercular education."

Gradually we are beginning to realize that tuberculosis is a state and community problem and not an individual one. The sanatoria are schools whose instruction is of far more value to the infected individual than the three R's. West Virginia needs much greater sanatorium facilities than she at present possesses.

And now to our point. Let us as physicians impress upon our next legislature not only the propriety of dealing more liberally with Hopemont, but the necessity as well of establishing a like institution in Southern West Virginia.

—W. E. V.

THE COMING MEETING AT HUNTINGTON

It seems scarcely possible that the time for another annual meeting of the State Association can be close at hand. The time surely does seem to have wings.

One of the most difficult problems in arranging for the annual meeting is the arrangement of the program. This is, I am told by a number of past state secretaries, the most difficult thing which confronts them each year.

Part of the difficulty is due to the thoughtlessness of those men who desire to present papers or addresses, in that they wait until the very last minute to notify the program committee of their intention

or the subject which they wish to discuss. The result is that there is no place available on the program and their names are not printed on it. The program for these annual meetings must be all arranged and ready for the printers at least a month before the time for the session. This is because of the amount of proof reading and correcting before the final copies can be run.

A request has been made to us by President MacQueen and Secretary Ashworth that those men who will read articles at this year's meeting shall select their subjects at once and notify the State Secretary as soon as possible.

Please give this matter thought now and do not delay sending your titles in after deciding upon the subject.

County Society Reports

Dartmoor, W. Va., Nov. 26, '21.
Ed. W. Va. Med. Jour.:

Dear Sir: In compliance with your request I am sending you a report of our last meeting of the Barbour - Randolph - Tucker County Medical Society. Our regular time for meeting was in the first half of October and we had the day fixed and program printed, but owing to a quarantine at Elkins, on account of Diphtheria, the meeting was postponed until November 19.

The society met in the Y. M. C. A. building, Elkins, on November 19, at 2:30 p. m. Present, Drs. Bosworth, A. S. Pierce, Perry, Golden, Irons, Wilson, Moore, S. G. Hall and Gray, Dr. Aaron Arkin visiting.

Dr. Perry presided. Minutes of the previous meeting were read and approved. The secretary reported he had procured a society seal, as directed.

On motion the president was authorized to appoint a local committee of members at the place of meeting, to prepare a program, fixing day of the next meeting.

A communication from H. L. Gilchrist, lieutenant-colonel, Medical Corps, U. S. A., Chief Medical Section, Chemical Warfare Service, was read by the secretary.

The election of officers was then called for, and since Barbour and Tucker were not represented, only the president and secretary-treasurer were elected, vice-president and councillor being postponed till the next meeting.

Dr. Geo. L. Pierce was elected for president for 1922 and J. C. Irons secretary-treasurer for the next year.

Dr. Aaron Arkin read a most scholarly paper on "The Great Problems of Modern Medicine," in which he especially emphasized the importance of a more careful research and care in the treatment of the diseases, which, so far have not been controlled by medical science. In this list, he mentions cancer, tuberculosis, arterio-sclerosis and cardio-vascular diseases, nephritis, pneumonia and diabetes. Dr. Arkin believes that these diseases which have so baffled medical science are most generally the result of some local foci of infection, and that to prevent the disease the cause must first be located and removed.

After reading this most excellent paper Dr. Arkin requested that if any one had questions they wished to ask, he would be glad to answer as far as he could. Several ques-

tions were asked and this resulted in quite a general discussion.

The society gave to Dr. Arkin a unanimous vote of thanks for his paper.

The treasurer was authorized to pay Dr. Arkin's expenses in attending the meeting.

Dr. Irons read a paper on "Epilepsy; History, Etiology, Diagnosis and Treatment." He especially called attention to the good use of Luminal in controlling the seizures, citing two cases which show the effect of this comparatively new drug.

The meeting then adjourned to meet in Elkins in January, 1922.

J. C. Irons, Secy.

Jan. 12, 1922.

The regular, the first, meeting of the Cabell County Medical Society of the year was held in the grill room of the Frederick Hotel. Meeting called to order by the president at 8:30 p. m. Minutes of the last meeting read and approved.

Ohio Valley Printing Company bill of $22.50 was presented, for printing letter heads, etc. Approved by the society and ordered paid.

The president, Dr. Bloss, addressed the society on the subject of the State Society meeting, saying that he would appoint all necessary committees at the next regular meeting.

There being no paper for presentation and no cases to report by anyone present, Dr. Bloss reported the use of some new obstetrical sutures that had apparently resulted in two cases of thrombo-phlebitis, on which there was some discussion. Dr. Bloss then reported a peculiar case of hemophillia in a woman, asking for some help as to the etiology of the case. Dr. Sweezey suggested it was in some manner linked up with the nervous system, having had the care of a case somewhat similar.

There being no further business the society adjourned. Present, sixteen.

W. C. SWANN, Secy.

The Marshall County Medical Society met on January 9, 1922, at Moundsville, with the largest attendance present in the last five years. The following program was carried out:

Paper: General Thoracic Conditions, Dr. Harry M. Hall.

Paper: Broncho - Pneumonia, Dr. L. W. McCuskey.

Paper: Coryza, Dr. Leo D. Covert.

At the opening of the meeting Dr. P. D. Barlow, president, made a few remarks as the newly-elected president, the substance of which was, "Be Ethical; be interested; be regular in attending medical meetings; help make the society a success by presenting papers when called upon."

Dr. A. Fillmore Compton, Secy.

Fairmont, W. Va., Jan. 6, 1922.

Dr. Jas. R. Bloss,
Huntington, W. Va.

Dear Dr. Bloss:

At the last meeting of Marion County Medical Society, December 27, 1921, the following officers for the new year were elected:

President, Dr. J. A. Reidy, Monongah, W. Va.

Vice-President, Dr. E. W. Strickler, Fairmont, W. Va.

Secretary, Dr. Luther Davis, Fairmont, W. Va.

Treasurer, Dr. C. W. Waddell, Fairmont, W. Va.

Censor, Dr. L. D. Howard, Fairmont, W. Va.

Delegates to State Convention.

Drs. H. H. Carr, J. C. Collins and C. W. Waddell. Alternates: Drs. A. L. Peters, H. S. Keister, R. H. Powell.

The following are the names of the newly elected chiefs to the Cook hospital staff:

Surgical Department: Dr. L. D. Howard.

Surgery of Obstetrics and Gynecology: Dr. C. S. Fleming.

Ear, Eye, Nose and Throat: Dr. H. R. Johnson.

Genito Urinary: Dr. H. S. Keister.

Anaesthesia: Dr. L. N. Norris.

X-Ray: Dr. H. H. Carr.

Medical: Dr. U. B. Boyers.

Diseases of Children: Dr. C. L. Holland.

Gastro Interoloyist. Dr. C. L. Park.

Clinical Pathology: Dr. C. W. Waddell.

Yours truly,
J. B. CLINTON.

Princeton, W. Va., Oct. 20, 1921.

The Mercer County Medical Society met in Dr. J. R. Vermillion's office at 9:15 p. m., with Vice-President Dr. H. C. Hays presiding.

The minutes of the previous meeting were read and approved.

Under clinical cases Dr. Wallingford reported a streptococcic infection of the inguinal region, arm and side of chest of a patient of his. This general infection was drained from an opening in the side.

Your secretary reported a case of streptococcic infection of an index finger of a woman, caused by a slight cut at the tip of the finger from a tin can, resulting in suppuration along the flexor tendons into the hand, incisions into the front and back of the hand with drainage and final amputation of the finger. Most of this damage might have been prevented by giving one or two large doses of anti-streptococcic serum in the early stages of the infection rather than two small doses.

Dr. Kirk reported a case of phlegmonous cellulitis of streptococcus infection, referring back to a case Dr. Vass reported to the society several months ago. He recommended Dakin's solution for treatment in cases of this type.

Dr. Carl W. Smith, of Princeton, W. Va., was elected a member of this society.

The following bills were allowed and ordered paid:

The Foland Printing Co., September 17, 1921, circular letters, $4.50; October 15, 1921, 100 circular letters, $5.00; total $9.50.

Applications of Dr. E. H. Thompson, Herndon, W. Va.; Dr. W. B. Sisson, Princeton, W. Va., and Dr. C. B. Lynch, Princeton, W. Va., were received.

Adjourned at 10:06 p. m.

H. G. Steele, Secy.

Bluefield, W. Va.,
Nov. 23, 1921.

The annual meeting of the Mercer County Medical Society was held in one of the committee rooms of the Chamber of Commerce in Masonic Temple. President Dr. W. C. Slusher, presided, with fifteen

members and two visitors present.

Under clinical cases Dr. W. W. Harloe, of Matoaka, reported two interesting cases, a case of anomaly of development and a case of an unusual tumor.

The anomaly of development was in a child two months old and was most unusual. The mother had given birth to several children previously, all of whom were normal. This child was born without difficulty and has thrived and grown well. All of the flexor muscles of the upper and lower extremities both seemed to have been involved in this anomaly. The elbows, the wrists, the hips, the knees, and ankles were all in a state of complete flexion, and apparently no joints existed in the lower extremities. Dr. Harloe presented the case both as an object of interest and to ascertain if anything could be accomplished for the child. It was the concensus of opinion that an orthopaedic surgeon should be consulted, but little hope of result was entertained.

The second case exhibited by Dr. Harloe was the case of a colored woman. The most striking feature of this patient was her weight—something over 300 pounds. Years ago she had a tumor which appeared in the region of the left lower jaw. Seven operations in all hod been done in an effort to eradicate this tumor. There was a recurrence at this time. This tumor of course was a variety of osteosarcoma and represented only a mild degree of malignancy. Another interesting feature of the case was a peculiar skin manifestaation causing the patient much inconvenience by intense itching. Often the patient is forced to remain awake all night. Dr. Harloe was open for suggestions for relief of this skin manifestation. Numerous suggestions were offered.

The first on the program was Dr. W. W. Harloe, of Matoaka, who read a brief and pointed paper on Responsibility and Duty of Hospital Surgeons to report to the county practitioner the findings in the cases sent to them, in which he related several instances where he had sent cases to the hospitals for diagnosis and after a positive "Wassermann" had been made antisyphilitic treatment had been administered, when he could have given the treatment himself had the case been referred back to him. Other patients had been sent to the hospital for an operation and on returning home he had not been notified by the surgeon, and therefore the patient was neglected as to further treatment or became disgusted because his home physician did not come to see his and called in another physician to look after him.

This paper was discussed by Drs. S. T. St. Clair, and Hays. Dr. Harloe closed the discussion with a few remarks.

Dr. A. H. Hoge read an instructive paper on physical signs of Incipient Tuberculosis, which will be printed in the State Journal later. He tried to impress upon us the importance of making a physical examination before sending a patient to the hospital for an X-Ray diagnosis.

Dr. C. C. Peters read us a very good paper on Classification and Prevention of the Infectious Diseases. He went so far as to write these classifications on the blackboard and pointed out to us the important points in the classifica-

cion. In discussing this paper Dr. Vass told of the improvements the Bluefield Board of Health was making in a sanitary way in the city of Bluefield, along with the hope of soon being able to employ a full time laboratory man who would be able to examine milk, water, sputum, and make cultures from throat swabs. More strict quarantine laws would be enforced, etc. Discussions were made by Drs. Reynolds, Rogers, Hoge, Morton, Steele and others.

To me this meeting was a very good post graduate clinic, and the physician who was not present missed quite a treat.

The next was the annual election of officers for 1922, which was as follows:

President, Dr. H. C. Hays, Princeton, W. Va.

Vice-President, Dr. R. O. Rogers, Bluefield, W. Va.

Secretary, Dr. H. G. Steele, Bluefield, W. Va.

Treasurer, Dr. C. T. St. Clair, Bluefield, W. Va.

Censor for three years, Dr. Sam Holroyd, Athens, W. Va.

A motion was duly made, seconded and carried that we combine the offices of secretary and treasurer into one:—Secretary-Treasurer; that that part of Article V., of the constitution be changed from secretary and treasurer, to read "Secretary-Treasurer," and the duties of this office be the same as described in sections 4 and 5 of chapter III in the by-laws. This to be voted on at one of our future meetings.

We left the Chamber of Commerce room and proceeded to the banquet hall of the Busy Bee Restaurant where we enjoyed a delightful luncheon and smokes and continued with the business of the society, as follows:

The secretary informed the members that we had already had several well written papers read before this society and he wanted a number of others soon in order to pick out a few to be read at the next meeting of the State Society.

So now get busy, get into this contest and prove yourself worthy of a place on the program of our next state society meeting.

The secretary insisted on the title of each paper being in his hands three weeks before printing of the program, in order to allow each member an opportunity to study that subject and come to each meeting prepared to discuss it. He also emphasized the importance and benefit it is to let the members of the society be informed who among our midst are preparing, or are already, specializing any particular line of medicine or surgery.

The president appointed Dr. O. S. Hare on a committee to audit the secretary and treasurer's books.

The following bills were allowed and ordered paid:

H. G. Steele, messages, stamps, etc., $15.48.

The Foland Printing Co., $5.00.

Busy Bee Restaurant, $17.00.

Total, $37.48.

It was suggested that we have a speech from our out-going president at the December meeting and one from our incoming president at the January meeting.

Adjourned at 11:15 p. m.

H. G. Steele, Secy.

January 19, 1922.

Mr. Jas. R. Bloss, Editor,
W. Va. Med. Journal.

At a meeting of the Eastern Pan-

handle Medical Society, held December 14, at Martinsburg, a very interesting talk was given by Dr. Tom Williams, of Washington. New officers were elected for the ensuing year, as follows:

Dr. G. J. E. Sponseller, president.

Dr. D. P. Fry, vice-president.

Dr. G. P. Morrison, secretary and treasurer.

The next meeting will be held in March, at which time it is expected two very interesting subjects will be covered by two of the leading men of Baltimore.

G. P. Morrison, Secy.-Treas.

The Raleigh County Medical Society met in regular session Thursday evening, November 3, in the Beckley Hotel. In the absence of the president, the secretary, Dr. Charles S. Smith, presided. This was the occasion for what we might term our usual annual meeting and the society was the host to a number of prominent physicians. The meeting was opened with a very fine dinner, and after the dinner was over the following interesting and instructive program was rendered.

Dr. W. T. Vaughan, Richmond, Va., "Diseases in the Upper Right Quadrant."

Dr. J. Ross Hunter, Huntington, "Cancer of the Cervix."

Dr. C. M. Hawes, Huntington, "Injured Eyes."

Dr. Oscar Biern, Huntington, "Treatment of Bronchial Asthma."

Dr. W. R. Hughey, Charleston, "X-Ray Diagnosis of Gastric and Duodenal Ulcers Illustrated with Lantern Slides."

Dr. W. S. Robertson, Charleston, "Some Points in the Diagnosis of Urological Conditions, Illustrated with Lantern Slides."

It would be impossible to enter into details and tell just what each of these men told us, and to say that their papers were unusually fine, interesting, instructive and highly appreciated would be putting it very mild. We enjoyed their visit and we hope that they will come again.

The following were present at the meeting: Drs. W. T. Vaughan, J. R. Hunter, C. M. Hawes, Oscar Biern, W. R. Hughey, W. S. Robertson, J. E. Coleman, Robert Wriston, Forrest Puckett, Chas. S. Smith, A. H. Grigg, W. W. Hume, J. H. Hoskins, D. B. and K. M. Jarrell, Fred Stansbury, U. G. Cook, T. F. Garrett, B. B. Richmond, Fred Richmond, A. D. Tyree, B. W. Eakin, George W. Johnson, F. J. Moore, M. C. Banks, A. U. Tieche, I. M. Fisher, I. V. Grissom, W. C. Mays, W. W. Cooper, D. W. Williams, T. C. Moorfild, C. J. Casto, J. W. Watkins, B. W .Brewster, Templeton Adair, J. W. Van Pelt, R. L. Penn.

The Raleigh County Medical Society met in regular session Friday evening, December 9, in the Beckley Hospital. Dr. E. S. Dupuy, president, presiding. Minutes of previous meeting read and adopted. The secretary then rendered a statement of work accomplished during 1921, together with the report of the treasurer, which was ordered accepted. The next business to come before the society was the election of officers for the ensuing year, which were as follows:

Dr. B. W. Eakin, Tams, president.

Dr. U. G. Cook, Beckley, vice-

president.

Dr. J. H. Hoskins, Beckley, vice-president.

Dr. Chas. S. Smith, Beckley, secretary.

Dr. A. H. Grigg, Beckley, board of censors.

Dr. Fred Stansbury, Beckley, board of censors.

Dr. T. F. Garrett, Sprague, board of censors.

The secretary was called on for a statement relative to the work that he and other medical men and dentists in Raleigh county had accomplished in public health work among the schools of the county. He made a detailed statement of the number of children examined; the number of defects found etc., and in closing he urged the Raleigh County Medical Society to go on record as approving the employing of a full-time health organization in Raleigh county.

Dr. M. V. Ziegler, a member of the State Health Department was presented and was introduced to the society by Dr. Chas. S. Smith. Dr. Ziegler came here at the request of Dr. Smith to meet with the medical society and explain the advantages of having a full-time health organization in the county. He entered into a detailed report of the advantages of the work; how the State Health Department could help us, etc. Dr. Ziegler had previously investigated the epidemic of typhoid at Affinity and was fairly well acquainted with the sanitary conditions. He urged that the medical men of the county co-operate with various other civic organiations of the county in endorsing the employment of a full time health organiation. Dr. Ziegler's talk was interesting, instructive and thoroughly enjoyed.

Mr. Rowell of Charleston, a representative of the Anti-Tuberculosis Association, was presented and gave us an interesting talk of the advantages of health work among school children and he endorsed everything which Dr. Ziegler had said. He was followed by Miss Alvis, a trained nurse, employed by the Woman's Club and Anti-Tuberculosis Association, and Mrs. H. E. Phipps, president of the Woman's Club, both asking for the co-operation of the medical fraternity in carrying on their work.

The society then adopted a motion endorsing the employment of a full time health organization in the county.

No further business the society adjourned to enjoy a very nice dinner prepared for them by the Beckley Hospital.

E. S. Dupuy, President.
Chas. S. Smith, Secy.

CABELL COUNTY SOCIETY

The meeting was called to order by the vice-president, Dr. Sweezey. The application for membership of Dr. Chas. Hicks was read, and due to the fact that the society that the doctor had previously been a member of, was not functioning. He was passed into the society membership by the proper votes. The applications for membership of Drs. Belcher and Gibson were also read and referred to the censors as usual.

The speaker of the evening was then introduced. Dr. John E. Cannaday of Charleston, and his assistant, Dr. E. B. Henson. Dr. Cannaday rendered an excellent paper on

the Treatment of Fractures of the Long Bones, giving slides of X-ray plates as illustration of the results. Dr. Henson followed Dr. Cannaday with the details of treatments and some anatomical drawings were used to illustrate.

The discussion was opened by Dr. Wilkinson, followed by Drs. Rader, Guthrie, and Jones. Dr. Cannaday then closed the discussion. A rising vote of thanks was given by the society in a recitation of the excellent paper.

Dr. Ziegler, who has been in Huntington investigating the typhoid situation, gave a short, snappy talk on his findings regarding the cause of our typhoid.

Walter C. Swann, Secy.

State and General News

Dr. M. G. Hoffman, of Bunker Hill, and Miss Ruth Knott were married December 17.

Dr. E. A. Ward, fo Hedgesville, was operated on at the City Hospital for an effusion of fluid in the left thorasic cavity.

Dr. T. K. Oates has erected a three story building at Martinsburg for the purpose of organizing a group. So far he has not completed his personnel, but has a man for the X-ray department and one for laboratory. He expects to have the clinic ready by June first.

The Rotary Club of Martinsburg has furnished a ward at the Kings Daughters Hospital for the purpose of doing orthopedic work, on poor but deserving children. Already three patients have been under treatment, which is in charge of Dr. Jas. A. Duff, of Martinsburg.

Dr. R. A. Ashworth, State Secretary, has just recovered from a very exciting experience, that of killing his first rabbit on the run.

Dr. J. C. Peck spent several days in the southern part of the state looking after his farm.

The Prison Physicians, Drs. Ashworth and Wilson are busy preparing a clinical conference to be given to the Medical Society of Marshall county, and visitors at the state penitentary in the near future.

Brig.-Gen. Charles E. Sawyer, President Harding's personal physician, has laid before the Senate Committee on Education and Labor a detailed plan for the creation of a new executive department of the government with a cabinet officer at its head. The proposed name is the Department of Public Welfare. The plan provides for an executive department with four main divisions covering education, public health, social service and veterans' service administration. It contemplates placing all the existing agencies in the government dealing with these matters in the public welfare department under the public health division, which would be in charge of an assistant secretary. General Sawyer declared that the arrangements were to co-ordinate research work, quarantine and sanitation and hospitaliation. He insisted that there was no reason why the United States should not have the strongest public health service in the world since it has the greatest surgeons, investigators, and laboratories to make it possible. He pointed out that there was no practical reason for having existing

public health service under the Treasury Department.

The following was the program of the Ohio County Society for Friday, January 13, 1922, 8:30 p. m.

Dr. C. H. Keesor, "Some Obsrevations on Medical School Inspection."

Dr. J. E. Marschner, "Some Remarks Concerning the Compulsory Vaccination for the Prevention of Smallpox and the Schick Test for Diphtheria."

Discussion of both papers by Dr. M. B. Williams and Dr. H. M. Hall.

Dr. William Phillips Carr, long recognized as a leader in the medical profession in the District of Columbia, died recently at Summit Point, W. Va., where he had been staying for the past twelve months for his health.

Dr. Carr was known as "the father of Emergency Hospital." It was through his efforts that the present institution was erected and two months ago he was named professor emeritus by the staff of the institution. He was identified with every step in the development of the hospital.

George Washington University Hospital, with which he also had a connection for many years, likewise regarded him as one of its strongest pillars.

Retiring from active practice last fall, Dr. Carr removed to West Virginia because of ill health. He made frequent visits to his home here and two weeks ago while visiting friends in the city he appeared in good health.

Born May 10, 1858, at Boydton, Va., Dr. Carr attended chool at the Leesburg Academy, Leesburg, Va. He later matriculated at Randolph-Macon College. He studied medicine at Washington University, graduating at Columbia College, now George Washington, in 1888. On completion of his course he became a member of the faculty and practiced his profession here.

In 1895 Dr. Carr became surgeon at Emergency Hospital and continued in that capacity until a few months ago.

He was consulting surgeon at Washington Asylum Hospital and at the government hospital for the insane at Anacosta.

Dr. Carr was one of the founders in 1913, of the American College of Surgeons. Among other medical organizations in which he took an active interest are Southern Surgical and Gynecological Association, Medical Society of the District of Columbia, Washington Academy of Sciences, Association of American Anatomists and Washington Gynecological Society.

For many years Dr. Carr contributed to medical journals and his articles of medical subjects were regarded as standard.

Dr. Carr is survived by two sons, Dr. William Browne Carr of Warrenton, Va., and former deputy coroner of Washington, and Edward R. Carr, of Washington.

Wheeling district was shocked last evening by the announcement that Dr. Robert Hazlett Bullard was dead. Dr. Bullard passed peacefully away at his country home at Oakmont, near Triadelphia, at 2:30 o'clock Wednesday

afternoon. His death was due to an attack of pneumonia, of which he had been ill since Friday.

No funeral arrangements had been made last night.

Dr. Bullard was a son of the late R. J. and Susan A. Bullard. He graduated in medicine at the University of Cincinnati in 1877. He lived in Wheeling and practiced in the city until about twenty years ago, when he moved to his country home.

On April 23, 1884, he was united in marriage to Miss Anna Louise Hupp, a daughter of Dr. John C. Hupp, who survives him. Besides his widow, he leaves nine children: Mrs. Curtis Orr, who resides near Roney's Point; Archibald, Mrs. Ralph Ely, Robert, Todd, Louise Reuben, John and Miss Caroline, at home. He also leaves three brothers: George R. Bullard, of Indiana; R. J. Bullard, of Martins Ferry, and E. R. Bullard of the Island, and two sisters, Mrs. Azella Shriver, of Pleasant Valley, and Miss Anna Bullard, who made her home with Dr. Bullard.

Many splendid tributes to the life of Dr. Bullard were heard last evening following his death. It would be difficult to measure, with any adjectives of praise, the great work for humanity that Dr. Bullard has done. His was a ripe and crowded life of skillful and devoted service.

As noted above Dr. Bullard graduated in medciine at the University of Cincninati, a member of the class of 1877. For several years before entering college he had as his preceptors here in Wheeling, the late Drs. Robert H. and James Cummins.

Before Dr. Bullard removed to the country, he had a very large practice. His opinion was sought frequently in consultations, and he was one of the leading obstetricians in this end of the state. Year after year he lived by the strictest schedule that made possible an unbelievable amount of work. At the time of the founding of the old City Hospital he was one of the faithful attending physicians.

His technical skill and rare personal gift to observe, to diagnose, to heal and to cheer, lay open for rich and poor to share in equal measure.

Dr. Bullard lacked all of the striking gestures of the aggressive leader; rather he ruled and impressed by the natural dignity, skill and utter simplicity of the truly great man. No doctor commanded greater loyalty and respect and confidence. No doctor used simpler and more direct methods. It was as a friend by virtue of a common humanity that he healed and comforted.—Wheeling Intelligencer.

Medicine

THE INFLUENCE OF FAMINE ON DISEASE

The vast experiment on undernutrition furnished by the war taught much concerning other things than nutrition itself, especially the relation of nutrition to the incidence or manifestations of all and sundry disease processes. Much has been written concerning the decrease in obesity and diabetes among the population of the central powers as a result of en-

forced temperance as to food while the tuberculosis curve during the famine years has been extensively discussed. During the period of short rations the alimentary canal also had new experiences, both as to quantity and character of food, the potato and turnip assuming a more conspicuous place in the day's work of digestion than had previously been the case. Apparently on the whole the digestive tract met the new demands with success, for there seems to be no agreement in the German literature that there was any general increase in diseases of this part of the anatomy during the war. Some authors, as Boas and Albu, state specifically that there was no such increase; but many others report an increase in chronic dysentery, gallbladder disease and gastric ulcer. In view of the reputed relation of cancer of the stomach to the character of the diet and especially the vegetarian's belief that this disease is the result of meat eating, it is interesting to report that a careful study by Janowitz shows no evident alteration in either the number or the location of cancers of the digestive tract as observed in Berlin during the war, when compared with a similar group of population before the war.—Jour. A. M. A., Dec. 24, 1921.

TELANGIECTATIC SPLENOMEGALY

A systemic disease characterized by extensive proliferation of the endothelium of capillaries, particularly the organs that belong to the hematopoietic group — the spleen, bone marrow, liver and lymph nodes — is the subject of a discussion by Douglas Symmers, New York (Jour. A. M. A., Dec. 24, 1921). The most striking feature of the disease is to be found in massive enlargement of the spleen, due to profuse prolifreation of the lining endothelium of its smaller vascular channels, with the production of new capillaries and the subsequent formation of telangiectases, identical or related histologic changes being apparent in the other organs named and, occasionally in organs beyond those of the hematopoietic system. In certain localities, the proliferative changes in the capillary endothelium appear to arise in vessels that are native to the part rather than as the result of transplantation of cells from a remote focus. In other instances the same sort of cells may be seen infiltrating and distending capillaries, notably in the skin and liver; but whether these cells are produced in situ is not apparent. The disease is neither frankly neoplasmic nor strictly inflammatory, but presents features incident to both and, perhaps, is best included in that group which occupies a position intermediate between neoplasia and inflammation, taking its place in this regard, with Hodgkins disease, mycosis fungoides, Cohnheim's pseudolukemia, Sternberg's leukosarcoma, Gaucher's splenomegaly, and the like.

EXISTENCE OF GASTRIC ULCER WITH TABES DORSALIS

Three cases are discussed by Burrill B. Crohn, New York (Jour-A. M. A., Dec. 24, 1921). The first was one of violent tabetic crises

with symptoms very suggestive of gastric ulcer, but one in which the existence of the latter complication could not be established. The second was a case of tabes with predominant gastric symptoms and an unquestionable duodenal ulcer. The third was an example of advanced tabes with vomiting, hematemesis and melena due to an active bleeding duodenal ulcer. The frequency with which ulcer co-exists with tabes cannot be stated. That it can so co-exist and probably frequently does is most likely. The pathogenesis of the ulcer as a complication of, or as a co-incident of tabes is probably as follows: Cerebrospinal syphilis is accompanied in a large percentage of cases by gastric hypersecretion. Organic lesions of the spinal cord or brain often causes delayed gastric motility and probably abdominal gastric peristalsis. These two conditions presumably predispose to gastric or duodenal ulcer. Syphilitic aortitis may also play a role. Such ulcers as form are probably simple peptic and not syphilitic ulcers or syphilis of th estomach. The point of origin of the secretory and motor disturbances in the stomach and intestine is probably in the involvement in the pathologic process of the sympathetic fibers to these viscera in their passage through the dorsal spinal ganglions and posterior nerve roots. It is quite possible that the finding of a gastric or duodenal ulcer in tabes is a pure coincidence, and that there is no relationship of cause and effect between the two conditions.

Surgery

PROFESSOR LORENZ AGAIN

Nineteen years ago Professor Lorenz came from Vienna to Chicago to give orthopedic treatment to the child of a millionaire. From the time he left his own city until he boarded the steamer for Europe his trip was given publicity of an amount and kind that savored more of the circus performer than of the surgeon. That visit undoubtedly left in its wake blasted hopes and bitter disappointment in the hearts of poor cripples who, believing the newspaper reports that Professor Lorenz had well-nigh supernatural powers as an orthopedic surgeon, were for one reason or another unable to get the "miracle man" to treat them. The experience of 1902, it seems, is to be repeated. Professor Lorenz this time, according to press dispatches, comes to give free treatment to indigent American cripples. This at least is the ostensible reason. Recent reports indicate that not all the treatments are free, but that fees are being accepted for the "private examinations." On this point the papers quote Professor Lorenz as saying: "Of course, when people come to see a physician or surgeon in a private office they expect to pay a fee for examination and treatment. The receipts for any single day were never as much as $3,000. The most was about $1,000."

To those with medical training and therefore having knowledge of the facts, the publicity attending the present visit is nauseous. But that is its least indictment. The execrable taste of the whole mat-

ter might be forgiven if the public were to be the real beneficiaries. As a matter of fact it is the public —the crippled public—that is suffering from this blatant advertising campaign. It is the refinement of cruelty for sensation seeking newspapers to hold out to the crippled the false hope that Dr. Lorenz is a "miracle man" who will do for them what skilled orthopedic surgeons in this country have been unable to do. Medical men on both sides of the Atlantic know that the Austrian orthopedist has no phenomenal ability that places him in a class by himself. Professor Lorenz himself knows this—and admits it. The results accomplished on his previous trip were no better than the results of American orthopedic surgeons of that time. His most widely heralded "cure" was not a cure; it was a result as good as, but no better than good orthopedic surgeons the world over constantly get. The accomplishments on the present trip will doubtless be those of any good orthopedic surgeon, with the usual proportion of good, bad and indifferent results. Perhaps one benefit will be the arousing of those crippled to seek competent medical attention. But behind and above it all will be the bitter resentment and despair of those poor unfortunates who, while hopelessly crippled and while getting from American surgeons the best that science has to offer, will be convinced that could they only reach the "miracle man" their cure would be assured. Such publicity as the present pilgrimage is bringing forth is deprecated by the medical profession not because it is in bad taste, but because in its effects it is cruel.—Jour. A. M. A., Dec. 24, 1921.

TONSILLECTOMY UNDER LOCAL ANESTHESIA

Cowley (Kentucky Med. Jour., Aug., 1921) says that a neater and more perfect operation for tonsillectomy can be done under local than under general anesthesia. One has the patient under better control than is possible under general anesthesia; there is less bleeding; and, as the fossae can be inspected to better advantage, it is possible to dissect with greater exactness and certainty.

With procaine, the operation can be done on nearly all patients without pain. About the only exceptions are patients with old abscess cavities back of the tonsil.

In certain other patients, there is an apprehensive fear of the operation which is almost as distressing as is pain itself. Much of this disappears when it becomes known that neither ether nor chloroform are to be used, and that the patient will not be "put to sleep." For the rest, a dose of hyoscine-morphine-cactin will eliminate the nervous apprehension in most instances. The author gives it to all his patints, half an hour before the operation.

His conclusion is, that an operation under a local anesthetic (procaine) is usually safer, pleasanter than and in every respect preferable to general anesthesia.—Clinical Medicine.

CHANGE IN HOSPITAL HEAD TO COME MARCH 1.

Clarksburg, W. Va., Feb. 20.—There will be a change in superintendents at the Weston State Hospital for the Insane on March 1, when, in accordance with a suggestion made a month ago by Governor Morgan, Dr. Cummings E. White will retire. Dr. White as been superintendent at Weston for about four years. It is not known here who will be the new superintendent but the name of Cecil Denham, at present the assistant superintendent and a former resident of Gypsy, Harrison county, is mentioned in that connection.

Dr. and Mrs. C. M. Hawes, who have been visiting at Palm Beach and St. Augustine for the past two weeks have returned to Huntington.

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CONGENITAL HYPERTROPHIC STENOSIS OF THE PYLORUS, WITH SPECIAL REFERENCE TO ITS SYMPTOMATOLOGY AND TREATMENT.

By A. C. Harrison, M.D., Baltimore, Md.

Read before the Surgical Section, W. Va. Med. Assn., Charleston, May, 1921.

Though the literature of this subject is now abundant, and case reports are becoming numerous in some localities, it is still evident that intimate knowledge of the subject is not sufficiently widely distributed, especially among general practitioners and those who have charge of the infant in the first few months of life. It is a striking fact, like in many other diseases that have been thought to be rare, that as this condition becomes more clearly understood and knowledge of its symptomatology more widely disseminated, the greater the number of cases occurring, or rather, recognized in any given community. It is for these reasons that I have thought it worth while to bring the subject before this body.

The treatment of these cases is purely surgical as it is doubtful if any true case of Congenital Hypertrophic Stenosis of the Pylorus ever recovers except through operative procedure.

The operation for this condition has been greatly simplified since a few years back, when gastro-enterostomy was the operation of choice, and the very recent statistics in the hands of those expert in operating on these cases, will compare favorably with those of most abdominal procedures. Nevertheless, it is obvious that if good results are to be obtained, the child must be brought to operation before it is moribund.

I believe it can safely be said that there are few, if any, conditions in which the symptoms are so clean-cut and the diagnosis arrived at with equal ease and surety. In spite of this fact, a study of the reported cases will show that nearly all of them come from a few large

centers like Boston, New York, Chicago, etc., which indicates that they are found where the condition is understood and looked for.

Comparatively few cases have come to operation in Baltimore as far as I have been able to learn. My own cases came, the earlier ones (four in number), from Baltimore City. The three cases reported here occurred in 1920 and came respectively from Norfolk, Va. one; Easton, Md. one; Annapolis, Md. one. Nor have I been able to learn of more than two or three cases occurring in the hands of other surgeons. All of my cases have come from a single Pediatrician, Dr. John Rurah. The paucity of such cases operated on in that great medical center is due, I believe, either to the fact that many cases are not recognized or to lack of confidence in operative treatment, or to a very natural distaste for having human beings of such tender age subjected to surgery.

Etiology and Pathology

The Etiology of this condition is poorly, if at all understood. Many theories have been advanced, but none seem to satisfy. Whether it begins in utero or gradually develops after birth is still a question. Well marked cases have been found at autopsy on still births and a considerable number of cases do not develop sufficiently to give rise to recognizable symptoms until the fifth, sixth or seventh week. The condition as found, consists of a tumor mass at the pylorus, ranging in size from the distal phalanx of the little finger to that of the thumb. It is sharply defined, of cartilaginous hardness and covered with smooth glistening peritoneum and no adhesions in the neighborhood. There is never evidence of any inflammatory process. On microscopic study, the tumor mass is found to be due to hyperplasia of the circular muscle fibres alone. The mucous membrane lies in the lumen in longtiudinal folds in a more or less spiral manner and is usually thickened and oedematous. The lumen is not absolutely closed but is blocked much the same as an enlarged prostate blocks the urethra.

There is some uncertainty as to the permanency of this tumor, but the weight of evidence so far is largely in favor of permanency. In many cases that have been studied with the fleuroscope some years after gastro-enterostomy, the artificial opening has been seen to be actively functionating and the pylorus wholly inactive. Likewise in some cases that have come to necropsy, having died of some other condition, some years after operation, the tumor has been found still present. The stomach is usually more or less dilated and in many cases its walls are thickened and hypermotility is a characteristic.

The one really confusing element is that which has so long been recognized as pylorospasm and believed to be a purely spasmodic condition of the pyloric sphincter. On this point we can do no better than to repeat Holt's dictum.

Pylorospasm

"If spasm were in a large proportion of cases the only factor, why should recovery be as we find it, a matter of weeks, often months. A

temporary pyloric spasm undoubtedly occurs in many conditions, as in the projectile vomiting of cerebral disease, but definite, persistent spasm of the pylorus without hypertrophy is, I believe, yet to be proven. At necropsy it has been, in my experience, invariably present. It was found in every one of 26 necropsies made at the Babies' Hospital on this condition, the description in the record being almost always as follows: "A firm hard cartilaginous tumor was present." It would be well if the term 'pylorospasm' as defining a group of these cases were dropped from our nomenclature. Its use as indicating the sole pathological condition present has lead to much confusion of thought on the subject, especially regarding the indications for operation. It is responsible for the frequent delay and neglect of operation when it might have saved life. It is best to divide the cases into mild and severe. The former are the cases in which the hypertrophy is moderate. In other words it is a difference in degree and not of kind and the determining factor should be 'is there enough obstruction to endanger the child's life, and if so, how can it best be relieved.'

Symptoms and Diagnosis

1. It is usually, but not invariably, a first born male child of normal development.

2. It is usually, but not always, breast fed.

3. The most constant and earliest symptom is vomiting. It usually begins in the second, third, or fourth week. Rarely in the last week and still more rarely later than the sixth week. It differs markedly from the ordinary type of vomiting in the time it takes place, the manner in which is cocurs and the matter vomited; so much so that one may often predicate the correct diagnosis from this symptom alone. It begins abruptly on a given date. It occurs soon after nursing not infrequently while the child is still at the breast. It is forcible and projectile. The food is fairly shot out of the mouth, sometimes several feet. The amount is usually large, generally the entire feeding and generally it is repeated after each feeding. If the vomit is small in amount and infrequent, then presently a much larger amount than the last feeding will be brought up. The vomitus invariably consists of the food taken and nothing else. It is never bile stained nor is it ever accompanied by fever or pain or other indications of inflammatory conditions. In the beginning, and usually for some time, there is no impairment of appetite. The child is usually hungry and ready to take a full meal immediately after emptying the stomach. The vomiting is persistent and though change of food may temporarily lessen the frequency of vomiting, it soon recurs and its former severity.

4. Constipation is marked and in the more severe cases, nothing comes through except an occasional small meconium like stool. In some cases a very small amount of food passes the pylorus and in these cases the stools are infrequent and small though they are fecal.

5. The loss of weight is progressive, often amounting to half an ounce each day. The rapidity of loss depends upon the complete-

ness of the obstruction.

6. The urine is scant and there may be complete anuria for 24 hours or more.

7. In a short time emaciation and weakness is marked. The lower half of the abdomen is flaccid and more or less scaphoid while the upper is distended and tense.

8. Soon after the vomiting has set in there may be observed peristaltic waves passing across the upper abdomen from left to right. These waves are easily provoked by manipulating the stomach region or giving a drink to the child. Occasionally, observable peristaltic waves are delayed for 15 to 30 minutes after feeding.

9. In nearly all cases a tumor may be palpated somewhere to the right of the midline and above the umbilicus. The discovery of this tumor by palpation is somewhat of an art in which a little practice and experience greatly enhance the value of the procedure. If the lump is definitely located, it may be valued as pathognomonic of the disease and a positive indication for operation. The palpation should be proceeded with by gentle but firm pressure. If the stomach is greatly distended it should be emptied by passing a catheter. If there is resistance, it may be overcome by allowing the baby to suck a bit of sugar water or by placing it in a warm bath. Occasionally a whif of ether may be necessary.

10. One may not leave the subject of diagnosis without reference to the Fleuroscopic findings. This may be of great value in the duobtful cases. Especially is this true if conducted by an expert and one experienced in the study of these cases.

Dr. Alfred A. Strauss of Chicago, who reports 101 cases with but three deaths, depends almost entirely upon the fleuroscopeic findings to differentiate his cases.

Before leaving for the army in 1917, I had operated on four of these cases by the posterior gastro-enterostomy method, all of which cases did well from an operative standpoint and had continued to do well as far as their histories were traced, but they were soon lost track of.

During the summer of 1920 I had three cases and in these the "Fred-et-Rammstedt" operation, as practiced by Dr. W. A. Downs of New York, was used. These cases all did well and recent reports show that they have perused a normal course as to food and development since the operation. This operation has many marked advantages over gastro-enterostomy. It is much easier, requires but 15 to 20 minutes to perform and therefore is much less shocking to the patient.

Another great advantage is the fact that food may be given in small quantities so soon as the patient is able to swallow——a big element in these patients who are often close to the moribund state.

I believe that the "Rammstedt" operation is the ideal one, when properly performed, and that muscle-splitting flaps after the manner of Strauss add nothing of material advantage.

The operation should be done under carefully given ether anaesthesia. All preparations should be complete before the ether is started.

Operation

"The abdomen is opened through

an upper right rectus incision from 1½ to 2 inches in length. When the wound is retracted, the stomach is easily recognized; and if the portion of the anterior wall which appears is then picked up with anatomic forceps and gentle traction applied, the pyloric end of the stomach with the tumor is quickly brought into view. The tumor is then grasped between the thumb and index finger, and a longitudinal incision varying from 1 to 1¼ inches in length, according to the size of the tumor, is made at about the junction of the upper and middle thirds. This incision should start just proximal to the duodenum and should involve only about one-half the estimated thickness of the muscular layer. By gently spreading a pair of small, straight forceps inserted into the center of the incision, the undivided portion of the muscle tears, exposing the mucous membrane and by continuing this blunt dissection the division is carried down along the line of cleavage to the duodenal ring and well up on the stomach. The separation of the muscular layer from the mucous layer should be sufficiently complete to permit the mucosa to protrude freely into the wound.

Great care should always be used in spreading the muscle at the duodenal end of the tumor, as the change from the thick-walled pylorus to the normal duodenum with its thin muscular layer is very sudden, and there is great danger of opening the mucous membrane at this point. At the proximal end, the tumor gradually merges into the stomach, and there is not so much danger of injuring the mucous layer. Complete division of the tumor with the knife should never be attempted. As a rule there is little tendceny to hemorrhage except in the older babies. A small artery at the duodenal end of the incision may require a ligature; or, if this vessel has retracted under the muscular layer, it may be necessary to suture a bit of muscle fiber, easily obtained from the rectus, over the bleeding point. In the babies, aged 10 weeks and over, coming to operation, the tendency to bleed is much greater. Besides the artery at the lower angle, there is generally another near the stomach end of the incision. In these cases, continuous suture around the margin of the incision, supplemnted by a bit of muscle or omentum, may be necessary to control the bleeding. I do not believe that it is necessary to attempt to cover the exposed mucosa. After the pylorus has been dropped back into the abdomen, the line of incision is again inspected to make sure that all bleeding points have been controlled. The abdominal wall is then closed in the usual way."

Though Dr. Downs states that he does not believe it necessary to cover the gaping line of incision with omentum, I cannot help but feel that it is safer to do so.

The after treatment. One to two drams of mother's milk and one to two drams of water should be alternated each two hours by mouth. One ounce of water by rectum each three hours.

Stomach feeding is gradually increased until by the 5th day the child may receive its full diet.

Conclusions

"1. If a satisfactory history can be obtained, and if the findings of a proper physical examination are

correctly interpreted, the diagnosis of congenital hypertrophic stenosis should be made in practically every case.

2. If the patient is observed from the onset of symptoms, medical treatment may be tried for a period of not longer than ten days, provided the weight loss does not exceed 20 per cent during this time. If, at the end of this period, the child does not show definite improvement, operative interference is indicated. Any patient, continued under medical care, and suffering a relapse should be operated on at once.

3. All cases in which there is a history of a period of ten days or longer in which the data as to previous weight are lacking—and in which the patient is not in very good condition—should immediately be classed as surgical.

4. The mortality among patients coming to operation within four weeks from the onset of symptoms is less than 8 per cent.

5. The results following the Fredet-Rammstedt operation are permanent and the cure complete."

Case Reports

Case No. 1. Baby C. B. S. Male. First born. Normal delivery. Breast fed. Weight at birth 8 lbs., 4 oz. Began vomiting at end of third week. Weight at that time 9 lbs., 2 oz. Weight in the 8th week 7 lbs., 1 oz. 10th week 16 lbs., 1-2 oz. Rammstedt operation in the 10th week. Recovery complete. Last report, one month after operation, normal weight and development, normal food consumption.

Case No. 2. Baby L. C. W. Female. First born. Breast fed. Weight at birth 8 lbs. Vomiting began at end of 2nd week. In the 8th week weight 6 lbs. Operation in the 8th week. Rammstedt. Hypertrophy not marked. Recovery. Last report normal weight and development.

Case No. 3. Baby J. M. T. Male. Scond born. Normal labor. Artificial feeding. Weight at birth 9 lbs. Began vomiting on 12th day. Continued to vomit until th 21st day at which time weight was 6¾ lbs. Operation—Rammstedt. Recovery. Later reports normal weight, normal dvelopment.

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NEEDS OF MEDICAL EDUCATION AT THE WEST VIRGINIA UNIVERSITY.

Read at Fifty-fourth Annual Meeting West Virginia Medical Association, Charleston, May 1921. By John N. Simpson, M. D., Morgantown, W. Va.

Since our last meeting, when I laid before you the conditions of our Medical School and asked you for counsel and support, the legislature has met, the subject of a four-year

medical school was discussed, several bills were introduced to determine its status and location, but nothing was decided except that the sentiment of the members was that it should be developed at Morgantown as a part of the University. The feeling of the legislature toward the University was most cordial and I am informed by the floor leader in the senate that there will be no difficulty in getting anything which the Budget Commission will recommend. They realize that the time is ripe for a four-year school.

You will remember I urged this measure last year. During the present school year, we have been so crowded that the limit of accommodation in some classes has been reached even after dividing them into two sections and doubling the amount of instruction. Our extreme limit has been placed at fifty students in each class. For this reason we have fixed the entering class at fifty, giving the first choice to West Virginians, but after July first we will admit outsiders. Judging from the number of inquiries, we will have to refuse many desirable men, although we have raised the tuition to $200.00 to non-residents, while tuition for our own men, if cadets is free and for others only $50.00.

In preparing data for presentation of our cause to the Budget Commission last December, I investigated the cost per student for his education per year at the leading schools of the country. I found that Cornell lead at $1800.00, Hopkins $1500.00 with University of Pennsylvania, Harvard and Columbia following very closely. At the two leading State Universities, Michigan and Iowa it was $1250.00. Last year we expended for salaries $37,000 and Equipment $10,500. There was earned by the school from Students Health Service $5,000.00 and from tuition about $4,000.00. We had 78 students. These earnings will about balance our laboratory expenses, which will leave a cost per student to the State of about $600.00. The cost to the student for tuition elsewhere ranges from $200.00 to $350.00 per year and his total expense in Cornell is placed at $1500.00 per year. It is less at some of the other schools but will average in the large cities at least $1000.00, with us the cost is about $600.00 per year. Of course this does not permit of any lavish display.

These facts were laid before the Budget Commission by the committee appointed by this association. When we met there were present, President J. Howard Anderson, Ex-presidents C. O. Henry, of Fairmont and V. T. Churchman, of Charleston, and the writer, Dr. Robt. J. Reed, of Wheeling, the chairman worked with me in the preparation of the data, but at the time was prevented by sickness from being present. Dr. L. V. Guthrie, of Huntington, also was not present. In our presentation I gave the above figures and showed the Board of Public Works that the **state for years had been acting as a parasite upon other medical institutions and that we should shoulder our own burdens and take an honorable position in the educational proceession.**

President Anderson spoke for the State Medical Association and let them know that it men with your hearty approval. Dr. Henry spoke for the Alumni of the University of which he is one of the older and

most useful ones. Dr. Churchman showed the working of a good medical school and the Council of Health. We were also ably supported by the Rev. Dr. Dakin, pastor of the Baptist church of Charleston who made an eloquent plea from the layman's point of view.

We were listened to with considerable interest by the board, but owing to the great demand for funds and with no visible means of increasing the supply it was not recommnded to the legislature as a part of the program for new buildings at the University. However, the University fared well, getting $900,000.00 for buildings.

The Board of Education are in favor of the establishment of the two hospital years, but in order to do it will require the building and equipment of a suitable hospital, the estimated cost of which will not be less than $500,000.00. The rejection of any plan to establish the school in Charleston or Huntington means that while it can be operated successfully at Morgantown, which at present is enjoying a phenominal growth, it will be slower in coming to full fruition than in a larger city. There will have to be changes made in our laws relative to the care of indigent poor similar to those passed in Iowa. These laws send all such medical and surgical cases to the State Medical School for treatment. Their service has been large and satisfactory and furnished abundant clinical material for instruction of their students.

The Board of Education will have to realize also that there is a difference in teachers of medical and academic subjects and be prepared to pay such specialists as will head the departments, salaries somewhat commensurate with that of successful practitioners. The modified plan of full time teachers could be worked by this arrangement, a salary of $6,000 would be paid and a permission to such men to have the use of a limited number of beds in the hospital where they could care for a few private patients but the rest of their time to be devoted to teaching and research. The younger men filling the less responsible position could be less restricted and paid less.

No large hospital can exist without a training school for nurses. The state should have such an institution as would appeal to women of character and education — one modeled on the lines of the Johns Hopkins hospital. A building for such a school, with living accommodations might cost $200,000. These, with the new buildings you endorsed last year to cost $300.000, would make our complete program One Million Dollars.

None of these will come **just for the asking by the school.** It will need team work in which the greater force is exerted by the united efforts of the State Medical Association. We must see to it that the proper influence is exerted at our homes in order to create the desired sentiment for school. We must get the newspapers interested in our plans. I feel this is done with another representative committee from our Association to lay our claims again before the Budget Committee that we will win.

The problem of physicians for our rural communities seems to be the states most serious medical problem. In my letters to physicians of the state I found that there were prosperous communities and

smaller towns without any physician. Somerville, the county seat of Nicholas County has no doctor. Many of these physicians have to ride 20 miles to serve the public, and the pathetic thing is that these are not young men just starting out in practice, but men passed middle life. One remarked in his letter that he did not know what the people would do when the older men were gone.

Our cities and larger towns are over supplied. So that for legitimate medical work the rural communities will offer a young man a quicker and more certain living.

These are the conditions. What can we do to solve the problem?

The study of medicine is the longest and most expensive of all the professions. **It is not recruited from the wealthy, but from people of small means.** How can the average farmer encourage his son, no matter how well equipped by nature, to aspire to our profession when it calls for seven or eight years of study, after his high school course, during which time he can hardly make his clothes. The whole cost to his father will be at least $5,000.00. If we can establish some means by which capable young men can borrow money, to be repaid with interest after they are established, we can make a provision of the loan that the recipient shall practice a certain time in a rural community. This would not be pauperizing the man but would enable him to maintain his self respect and he would appreciate it more in the end than a gift. Among our students we have a number who are more or less dependent upon themselves. It is a hard task since the openings for work are few and these usually at menial tasks and at the lowest pay. How fit is a man for study who gets up at 4 a. m. to help get out a newspaper, waits on table for his board and does janitor work on Saturday? And yet we have had one brilliant man who did it.

I wish I could interest this Association and the individual members to contribute to a revolving loan fund which would enable us to loan students who have demonstrated their capability, an amount equal to the cost of their room and board which would be about $360 a year, which at 6%would insure us against the possible loss of the principal, and would in most cases in five years begin to be returned so as to help another man. My experience in helping students has been that as a rule they are honest and we could trust them without elaborate security.

Mostof us could give $25.00 and some, more, to such a cause and feel much the better by it. Let none of us emphasize too much the value of helping ones self. Modern medicine demands all of a students time and a tired, jaded mind and body is not equal to the strain. When the physician earns the money with which to repay his loan, through his profession, it is done with a double profit, the experience that makes him a physician, and the increased pay which comes from less work. The writer before going to medical school was a teacher for eight years with a salary ranging from $200.00 to $700.00 for the year. He was able with this and a small loan to graduate at 33. This is a sacrifice of too much time if it can be avoided.

If we could raise a fund of

$25,000 the interest at 6% would enable us to maintain four men without using the principal. With the endorsement of this Association I think we can do it.

For the coming year we expect our budget to be $52,500, an increase of $10,000, which we feel will more fully equip our laboratory and enable the students to do better work and the professors to carry on important research problems which they are now able to do since we have the help and the facilities.

SECRETARY'S NOTE

Discussions: Churchman, we must play more politics if medical educational needs in West Virginia are to be met. We were saved in the last Legislature by Dr. Godbey of the Senate and Drs. McClintic and Grisinger of the House. **We must educate our boys in West Virginia if we are to have country doctors.** Dr. Robert J. Reed commends Dr. Simpson's paper and emphasizes Dr. Churchman's argument about the way to keep physicians in the country. **There is not a public Health question in West Virginia as important as a more extended course in medicine.** Dr. McQueen, we want to agree on this program and recommend it as a body. Dr. Keesor, we want to send a good man to each Component Society to advocate this legislation. Dr. Hoffman, we want to educate worthy young men by furnishing them money. I am in favor of a four year medical course. Dr. C. O. Henry, this is the most important question in the State. **Nothing costs too much for the health and welfare of our West Virginia citizens.**

EDITOR'S NOTE

Why have not those who agreed to raise the six hundred dollars for this year been called upon. I do not want any boy to have to work as Dr. Simpson says one did, to get through his Medical Course. It is too much. Several of us agreed to give fifty dollars each. Won't some one in authority please collect that six hundred.

EPILEPSY

By Dr. J. C. Irons

Read before the Barbour-Randolph-Tucker County Medical Society, Dartmoor, West Virginia

By way of preface, I may say, that it is not that I have anything new to advance as to the nature of this disease, but rather, to bring out from others, their view of this malady, and thereby have a clearer knowledge of its causes, and the best means of treatment.

So far as I know, epilepsy, like appendicitis, has no known, specific cause, and like sin and taxation it is, and always has been with us. It is described very definitely by Hippocrates, and by other ancient writers. Epilepsy is generally described as a disease of the nervous system, characterized, for the most part, by a sudden, brief disturbance of the brain functions, and usually attended with a loss, or diminution of consciousness, with some degree of convulsive muscular action, and generally with loss of muscular control, and the patient falls; hence the old name of "falling evil" or "falling sickness."

The pathology of epilepsy, (if I may quote DaCosta), as taught today is a huge probability, but unfortunately not an established certainty, and our remedial measures are suggested by experience rather than deducted from a scientific knowledge of any recognized fixed and measured morbid process. We know, beyond question, that in this malady, the cells of the cerebal cortex are in a condition of high instability, and prone to pass from normal functual relations into spasmodic activity, evinced by explosive discharges of nerve-force. Whether this condition be due to molecular alterations in nerve-structure lesions still unfound, but possible of recognition, we do not know,—nor do we definitely know whether the condition of the nerve-cells is the cause of the seizures, or the result of the primary casual force. "We should always remember that, as in dropsy, epilepsy is only the manifestation of the disease or may be one of many symptoms, and not the disease itself."

As far back as history shows and tradition indicates, epilepsy has afflicted men. Methods without number, drugs beyond estimate, have been employed for its cure. Castration and sexual intercourse, exorcism and trephining, excision of the cerebral ganglia of the sympathetic, and ligation of the vertebral arteries, circumcision and ocular tenotomy, the removal of the ovaries, and the adjustment of glasses have all been tried and have all been praised by notable and celebrated men. From the wearing of amulets to salivation, from charms to verminism, from divination to dog's dung, from wildest absurdities of judicial astrology to the most scientific methods of modern surgery, there are few plans which have not had believers, and few substances by which a cure has not been sought. Yet epilepsy is with us, and that to a fearful degree. Two persons out of every one thousand have it, and many more are predisposed. No specific cure has been found, and though occasionally curable, yet, in the great majority of cases, the best we can hope is to mitigate the severity, or retard its course. Hence the importance of prevention. Ramsey says, "Of all the so-called 'functional' nervous diseases, this condition merits attention first, because it is the most grave."

By common consent, without any known etiologic or pathologic condition, according to manifestations we have three types.

1. Grand Mal.: Where the attacks result in complete unconsciousness, with or without convulsions—most generally with.

2. Petit Mal.: Where consciousness is partially or wholly retained and convulsions slight or absent.

3. Irregular or Jacksonian Epilepsy, also known as cortical, symptomatic or partial epilepsy—mainly distinguished from the other forms by the fact that if consciousness is lost at all, it is later in attack.

Etiology: In a large proportion of all cases, the disease begins before puberty, though no age is exempt. Statistics show that slightly more males than females are afflicted, though no valid reason has been given why this should be the case.

Heredity: Formerly much more stress was placed on this predisposing course, than is now believed

or is demonstrated by careful observation. The per cent due to this factor, ranges, by different authorities from nine to forty-five per cent. However, most authorities agree that children of neurotics, marked hysterias, epileptics, paralysed, or insane are more liable to epilepsy.

Chronic Alcoholism is given a large place in the list of causes tending to produce epilepsy in offspring.

Syphilis may also be classed as not only a predisposing, but an actual cause of epilepsy.

Optical and Aural Defects: Many authorities, such as Ramsey, claim that these, at least, are exciting causes of epilepsy and prove the theory by curing the disease, by correcting the deficiency. It is significant that often the disease does not develope till the child enters school, and by the constant use of the eyes, the epilepsy is manifested. As many of you know, Dr. Reed of Cincinnati, claims that epilepsy is caused by some diseased condition of the colon, or other abdominal viscera, and that cures may be obtained by operation. This theory, I may say, is not generally accepted, and is yet to be demonstrated.

Infectious diseases are often followed by epilepsy, and are classed as frequent causes. Injuries to the head, or nerves, (traumatism) especially in head, injuries followed by tumors, or internal growths, or any pressure on the brain substance may cause epilepsy, and these causes should never be overlooked, when called to treat such cases.

In childhood, the convulsion often seen, as the result of nervous excitation, some authorities claim to be insipient epilepsy, such as we often witness from teething, indigestion, fright or fever—with this theory, I am not yet convinced.

A Chicago physician holds that the chemical transformation of common salt in the system generates an acid which, when in superabundance, causes epileptic seizures, and by withholding salt from the patient the disease may be held in abeyance, or cured. I learn he has had quite a success along this line on this theory. We are, however, forced to confess, that in the great majority of the cases, the real cause is not discoverable, and therefore the treatment is problematical or largely experimental at best.

Diagnosis

We may be lead to mistake epilepsy for uremic conditions, or those of toxemias, or hysteria, unless we are very careful to learn the history of the case, its frequency, its character, and the true physical condition of the patient. When the true history of the attacks, with prodromal symptoms, and clinical conditions are studied, there should be little difficulty in diagnosing epilepsy. The true symptoms are so definite, that I need not waste time in discussing them before this society. The main thing that appeals to me, is to ascertain the cause, in the particular case, since causes are multiple, and to know the proper treatment to give the case at hand.

Prognosis

In all cases the result of treatment must depend on the discoverable cause, and our ability to over-

come or remove the cause. Generally speaking the younger the patient, and the more recent the occurrence of the disease, the more hopeful the case. I am, however, forced to the conclusion, that in the majority of well established cases of true epilepsy, the prognosis is not favroable, as to cure, with any means, dietetic, medical or surgical as yet discovered.

Treatment

As already stated, in quoting Dr. DaCosta, almost every drug has had its advocate, some have had a recognized merit in controlling or mitigating the attacks, and some have seemingly achieved curative reputations. However, since 1857 when Laycock introduced the use of bromides, they, in some form, or combination, have had the lead as curative or controlling qualities. We all have seen that in large and repeated doses, bromide does lessen the frequency or severity of the attacks, but unfortunately most generally, the continued use of this drug causes such constitutional or digestive disturbnaces that we are forced to desist in the further use with the recurrence of the seizures with seeming greater severity.

Other drugs have had their advocates with seeming good modifying effects; Chloral, Antifebein. Antipyrin, either alone or in combination, with bromides, Nitrite of Amyl, Morphia, Codine, Zinc, Nitroglycerine, Connbaus Indica, Borax, and many other too numerous to mention have had their advocates, and their seeming good effects. I may say that most probably, with much of the drugs used the good seeming effects, was due more to the dieting and care of the patient rather than the medicine used.

Surgical operations, where discoverable causes can be located are often curative or beneficial, such as in brain tumors, defects of eyes, ears, etc., or compressions due to fractures, phymosis, and intestinal disorders — but unfortunately the cases needing such operations, are comparatively few.

Dieting

This should always be carefully attended to in all diseased conditions. In epilepsy over feeding has long been recognized as provocation of trouble. Certain articles of food or diet have been known to act as at least, an exciting cause. Stimulants are generally to be avoided, and as before mentioned salt is believed to be injurious, and may be a disturbing factor. The system should be maintained in as healthful condition as possible, and just here, is our greatest difficulty in using bromides. The most efficient drug in controlling the distressing and often dangerous seizures, I have yet used is Luminal. This is a drug that came into notice in Germany in 1912-13, and was favorably recommended before the war, but did not get its efficient trial till since the war. My attention was first directed to this drug by an excellent article in A. M. A. Journal, August 28, 1920, by Dr. Julius Grinker of Chicago. The chemical name of Luminal is pheno-barbital, or phenyl-ethyl-barbituric acid. It is put up in 1½ gr. tablets and in the form of white odorless and slightly bitter powder. Almost insoluble in cold water, slightly soluble in hot water, soluble in alcohol, ether, chloroform,

and in alkaline solution.

There is also a soluble preparation of Luminol Sodium, which is pheno-barbital sodium. This preparation is principally used hypodermically in the form of 20 per cent solution. The dose of Luminal Sodium is 10 per cent greater than Luminal. Luminal in larger doses, 3 to 5, or even 12 grains when necessary, is a good hypnotic.

Dr. Grinker says its greatest field of usefulness is in controlling or mitigating the seizures in severe cases in which bromides have failed or are inadmissible owing to constitutional effects.

Cases Reported

Case 1: Near six years ago I was called to see L. S., a boy seventeen years of age, who was having frequent seizures of epilepsy. He has been treated by various physicians. The family history was negative. A cousin of his mother was an epileptic. There were six children, five girls and one boy. The boy was third in age. An older sister had suffered from inflammatory rheumatism, had valvular lesions of the heart, resulting dilation, dropsy and ultimate death. Mother neurotic. The other four sisters normal. Father good health. The boy seemed normal and bright until eleven years of age, when epilepsy developed. The attacks were at first mild and not frequent, but gradually became more severe and at shorter intervals, his mind becoming more and more impaired. I tried to control the attacks with bromides, but with poor success owing to inability to use persistently due to digestice disturbances. I prevailed upon the family to send him to the home for incurables at Huntington. Three years ago, about, he was taken there where he remained about six months. He did not improve, got dissatisfied, and was brought home. The attacks have increased in frequency and severity, and with the increased attacks we had lessened mental ability, in fact an almost loss of mind power. I may add that after he came from Huntington I had seen recommended as useful a preparation put up by Tucker Pharmacal Company, New York, called Bromo-Adonis. I sent for this preparation. It seemed to lessen the frequency and severity, but impaired his general health, and the family thought aggravated his mental deficiency, and we ceased to use this much lauded epilepsy cure. I sent for some luminal about three months ago. The man, now 23, was having six to eight attacks daily. I gave him a tablet night and morning, and while he used them for two months, he did not have a single attack. However, the mental deficiency seemed to the family increased, and they decided to not use the medicine, with the return of seizures. The small doses required, and the prompt relief from the distressing convulsions, with only two doses in 24 hours, was a complete surprise to me. No claim is made as to its curative effects in old standing cases, but its control of the seizures is simply marvelous. I may add here the statement of the mother that shortly before these attacks began the boy had a fall, and she thinks that was the cause of the disease. However, I often find parents associating the disease with some minor accident, when thousands of more severe injuries are forgotten and

have no such sequel. We could never find any evidence of injury. I think cure is wholly impossible in this case, and that an early death would be a relief to all.

Case 2: Mrs. McD., age 25, married, mother of five children, been married seven years. Had some epileptic seizures before marriage. Health normal except these seizures. She is reported to have been thrown from a hand made and controlled merry-go-round and her trouble is supposed to have dated from that time and injury. Usually when pregnant she does not have seizures, but this last pregnancy, terminating October 12, only fifteen months after a previous confinement, gave no immunity; she having convulsions two to three times each week, usually coming on at night.

I first saw her about five years ago. She was then having attacks about every two weeks. I put her on a bromide treatment, with attention to diet and excretory functions; she was much relieved both as to frequency and severity of attacks. On October 12 I began by giving one tablet of luminal at night, and if that did not prevent the seizures to give night and morning. I have seen her several times since that date and she has not had a seizure since she began taking the medicine. The child has been quite ill ever since its birth, causing her to lose rest, and on three occasions she felt some of the prodromal symptoms of a seizure, when she took an extra dose, which in each case relieved the threatened attack.

Since the use of the luminal she presents quite an improvement in mental facilities, in fact is quite a different woman, takes great interest in her children and home affairs; before being apathetic and seemingly indifferent, as well as sluggish in speech. She was always in dread, lest when alone she might fall and injure herself or children. This dread is now removed. Luminal in her case, is a real God send.

May I not remark in conclusion that epilepsy has in my observation, generally been progressive, and finally ending in dementia and death, only being prolonged by medical treatment. May we not at least hope that in the earlier cases under luminal treatment the nerve or brain cell degeneration may be arrested and the life of the patient at least greatly prolonged, if not cured, and the constant dread of the distressing seizures eliminated or greatly mitigated.

NECESSITY FOR THE EARLY RECOGNITION OF THE SPECIFIC INFECTIONS

By C. C. PETERS, M.D., Princeton, W. Va.

Read Before the Mercer County Medical Society, November 23, 1921.

The object of this brief paper is not to tell you anything new, but rather to emphasize the growing necessity for the early recognition of the specific infections from a standpoint of public health administration and from a standpoint of individual security. With the knowledge of our splendid men of research that has been so rapidly accumulating for the past years there is no reason why we should not be reasonably secure from most all the serious infections. With reference to public health administration it

is not possible for the health officer to prevent disease without the co-operation of the physicians in the field. It is likewise impossible for the health officer and physicians to accomplish anything without the support of the entire community, backed by the finances and laws of the state, county and municipality.

There are many diseases that were once considered serious and fatal to mankind that are now easily preventable and how has this been brought about? By the combined workings of the investigation with the state and communities interested. Smallpox, typhoid fever, diphtheria, erysipelas, pyogenic infection, baccilla dysintery, tuberculosis, plague, anthrax, and tetanus are preventable diseases.

In order to simplify the specific infections which easily constitute the largest percentage of diseases to which the human being is heir and carry with them a larger death rate than all other diseases combined. We will use the following diagram which has been simplified from the various writers.

Diagram used is omitted.—Ed.

The explanation of the diagram gives you a bird's eye view of the sources of all infections or what constitute the specific infectious diseases. It follows that all the diseases mentioned are infectious. Many of them are contagious and with few exceptions the diseases of unknown origin are the ones contagious. All contagious diseases are infectious but the true infectious diseases are not as a rule contagious.

There are many of the diseases that continue to visit us occasionally in the form of epidemics, the having of which confers immunity for life, viz.: whooping cough and measles. We are not so concerned about these diseases except the age regularity at which these diseases can be borne. It is always our imperative duty to keep them out of nurseries, schools and hospitals, but in homes where children are of the proper age I do not personally believe it advisable to dodge these diseases. As to smallpox, which is one of the diseases of unknown origin the prevention of the spread of which has cost the civilized world untold millions of dollars, should in my opinion have no quarantine, since it is the disease in which we can obtain the most active and lasting immunity by vaccination. In explanation I want to make this statement. The reason that every one is not immune to small pox is because of ignorance and superstition against vaccination and since we do not have adequate laws to compel general vaccination I think it should be left a matter of choice to the ignoramus to either be vaccinated or have the small pox and in this way the long dreaded disease would soon be only an historical remembrance. The most of the diseases under discussion tonight are preventable if the right kind of community spirit prevails and the health authorities and physicians can get the proper support. Investigate the proper source of your infection and contagions. If you have a case of typhoid or scarlet fever investigate the facts. Report it to your health officer and thereby protect your community. By another year we will have a home for venereal cases maintained by Mercer county and its incorporated towns, and if the doctors are not too soft

to make reports we will have it well patronized. Wake up and report your cases. Report your births and deaths. Oh, you say, there is so much red tape you do not know how to proceed. Report all diseases, venereal and otherwise to your city or county health officer on cards furnished by the state for the purpose and report your birth certificates to your local registrar. The undertaker presents you with your death certificate. Now there is not so much red tape about that.

I have been county health officer since July first. I mailed report cards to every doctor in the county by which they could mail free of postage reports to me of all their infectious and contagious diseases. There were fourteen out of no less than fifty physicians who have not reported at all. Gentlemen, wake up and show some interest. Lend a helping hand to a just cause. Indifference is sometimes worse than opposition. Try to save others from infection, misery and death.

EARLY DIAGNOSIS OF BRAIN TUMORS BEFORE EYE SIGNS OCCUR. DIFFERENTIATION FROM ENCEPHALITIS AND FROM HYSTERIA AND EMOTIVITY.

By DR. TOM A. WILLIAMS, Washington, D. C.

Read at Annual Meeting W. Va. Med. Assn. Charleston, May, 1921.

When a patient is presented, because of unusual peculiarities of behavior, vague sensations, perhaps occasional dizziness, and undue tearfulness, an unaccustomed looseness of talk or irascibility, with impaired efficiency at work, it is all too common for the practitioner to infer that he is dealing with a case of hysteria. This is true even of one who has studied the mechanism of hysteria for most persons have in their lives the breeding places of psychological disaffection, which readily manifest themselves when they are sick, and may easily be mistaken for a psycho-genetic disturbance by those who lack general neurological experience. A common illustration of this contingency is the manifestation of delirium in the course of infections. Delirium is a psychological disturbance, the material of which is habitually the patient's normal preoccupation, those of his daily tasks, of his domestic life, of his personal leanings and ambitions. To deal with them psycho-therapeutically, however, we all know to be futile, as they are merely ebulitions of disordered chemistry in the brain.

Now a hysteriform syndrome is a common initial manifestation of the presence of a new growth in the brain. The difficulty of the diagnosis is further complicated by the error perpetuated in text books that the alteration of the visual field form in these cases are stigmata of hysteria. This error is based upon two observations: Firstly, cases with a true restriction of the visual field, diganosed as hysteria, and regarded as such, without subsequent observation of the case having revealed the true cause as a lesion. The second source of error is due to faulty method of observation by the ophthalmologists who have dealt with hystericals without realizing their facile suggestibility and in whom consequently they have suggested by the meth-

ods of examination alterations of the color fields, notably the well known inversion in which the blue field becomes smaller than the red.

Nowadays we know that inversion of color fields or restriction of the form field are indicative of physical damage and are not characteristic of hystericals properly examined.

Another drawback to early diagnosis in brain tumor is the belief implicit in many practitioners that one must find a swelling of the optic disc as well as vomiting and complaints of headache before diagnosing tumor. Now these symptoms come too late and are indicative merely of greatly increased intra-cranial tension. Indeed the general disturbances indicated by these signs often mask the local disturbances caused by the lesion, so that it can no longer be localized clinically. The diagnosis must then be made before onset of papiledema before severe vomiting, and before general diffuse headache. A local headache, however, may be an early sign. Dizziness, too, may be a local sign of the posterior fossa, and vomiting too may be caused by a tumor which presses upon the medulla oblongata. These tumors, however, are the easiest to locate on account of the abundance of the sensory motor structures traversing the region.

The most difficult tumors to detect are those in the cerebrum itself unless they implicate one of the great sensory areas or impinge upon the psycho-motor zone of Rolando, or unless they affect the apparatus of speech. If only the associational areas are touched, the mental disturbances may be so insidious as to escape detection for a long time, because the chance of receiving a neurological examination is very small.

Another complication making the diagnosis difficult is arteria hypertension, for the signs found may then be attributed to arterio sclerotic lesions. It must be remembered, however, that hypertension may be secondary to the disturbances of the vaso-motor centre.

Case 1

Thus I was consulted by the physician of a man in South Carolina in February, a man who had had an "apoplectic" attack in November with a blood pressure of 198. I found him torpid and aphasic, with headache localized to the left temple and weakness of the right arm and leg. The right cremastar diminished. There was right extensor response of great toe, substitutary aphasia and poor comprehension, without dysarthria, exaggeration of deep reflexes and automatic speech comparatively good. The spinal fluid was not morbid, the headache was much aggravated when he sat up suddenly, there was slight diplopia with strabismus, facial asymetry but not hemianopsia nor tremor, The most significant feature was the comparative recovery in January with a sudden relapse in Febuary, although the blood pressure was at the time only 140 in a man of 44 who was in rugged health in other respects.

The localization of the pain and the focalization of all the physical signs in spite of the torpor indicated a neoplasm rather than arterio sclerotic lesions in this case. Operation was recommended bu I have

not succeeded in hearing of the upshot.

Case 2

This case may be contrasted with that of a man of 22 seen at the same time, three weeks after sudden feelings of distress followed by excited delirium and later torpor. Examination showed enfeebled left Achilles, and diminution of the right abdominal reflex, a dull facies, a diminished diadocokineses and slight jerky tremor on movement with sluggish and wide pupils. The suddenness of this attack in a young man, along with the diffusion and variety of the physical signs pointed to epidemic encephalitis as the cause of his condition.

Case 3

Another case seen about the same time was also characterized by delirium followed by coma of acute onset. In this case, however, there were also coating of the tongue followed by extreme redness, pain in the chest, marked loss of appetite with emaciation and severe constipation, roughness of the skin and no neurological signs except sluggish motility and mentality. There was a history of great restriction of food during the winter to corn and molasses on account of the poverty induced by sudden fall in price of cotton. The diagnosis made then was pellagra.

Both in pellagra and encephalitis however, focal signs may be conspicuous. In that case it may be difficult to distinguish unless the patient is seen during the acute stage or a good history is obtained. However, it is unusual to find an intense impairment of function due to neoplasm and at all widespread unless there are also the classical signs of headache, vomiting and papiledema along with modification of the visual field. The total clinical picture too is generally distinctive to an experienced neurologist. If not, the progress of the case will enable determination to be made before it is too late to intervene surgically if one is dealing with a neoplasm.

From hysteria the diagnosis may be quite difficult when no physical signs have occurred, and flighty behavior is the only symptom, for patients whose cerebrum is impaired show an exaltation of suggestibility. This is a familiar truth to those who deal with states of mental confusion from intoxication. Encephalitis, however, resembles these latter in that there is an impaired fixation of attention, and the ductility as regards any particular stimulus is evanescent; while in the hysterial the suggestion tends to be tenacious. Further, hysteria should never be diagnosed by exclusion, but only after the discovery of the initial suggestion which has determined the hysterical behavior.

The erroneous doctrine that physical disturbances can be of hysterical origin must not be allowed to influence the clinical diagnosis in the study of these cases as has occurred in a local instance recently. The weak suggestibility due to encephalitis was the foundation of an erroneous diagnosis of hysteria in a case recently seen in North Carolina, even although lethargy was present and partial ptosis had occurred.

The most difficult diagnosis of all is from the mild acute psychopathies, with or without delirium. In these cases the diagnosis can be

made only by watching the course of the disease or by finding lymphocytosis of the spinal fluid.

INFECTIOUS OSTEOMYELITIS

By R. H. WALKER, M.D.

Read Before the Kanawha County Medical Society, November 22, 1921.

The subject of my paper this evening is acute infectious osteomyelitis. I have chosen this subject because I find that it is frequently not recognized by the general practitioner and that it is often treated as rheumatism for a number of weeks, or until it forces its recognition by the destructive action of suppuration in the bones and soft tissues of the part affected.

Osteomyelitis should be considered as emergency surgery as much so as acute appendicitis.

Murphy, in his clinics, said: "It is just as easy to diagnose acute osteomyelitis in the first eight, twelve or twenty-four hours as it is acute appendicitis."

The truth of Murphy's quotation is very difficult for us to appreciate apparently, more difficult than the necessity of early diagnosis and operation of acute appendicitis; my paper is a plea for early recognition of osteomyelitis and its prompt and energetic treatment.

Acute infectious osteomyelitis is defined as an acute suppurative inflammation of the bone which always begins in the marrow and is caused by pathogenic organisms. It has been called bone furunculosis. The direct cause is the pathogenic organisms of which the staphlococcus is the most frequent. The streptococcus, pneumococcus and typhoid bacillis are other organisms which cause acute infectious osteomyelitis, all of which organisms may be isolated in pure culture but are most often of the mixed type.

About fifty per cent of the cases occur between thirteen and seventeen years of age, exposure to cold, exhaustion and trauma is a frequent history; it often occurs secondary to infectious diseases and focal infections. In compound fractures it is always a source of worry to the surgeon until he is sure infection will not take place.

The portal of entry of these organisms is first: Secondary to other pyogenic lesions, such as boils, furunculosis, etc.

Second: From the respiratory system, following pneumonia, empyena and influenza.

It is considered primary when no portal of infection can be found; it is frequently located in the long bones in the diaphysis near the epiphyseal line of the long bones, the femur and tibia are most often infected. The location of the infection in the bones is perhaps due to the terminal nutrient artery which carries the infection to that point; the flat bones are not so often infected as the long bones, because they are of slower growth than the long bones and of poor blood supply. The clavicle is the most frequent of the short flat bones infected. The scapula and the frontal are next in order of frequency, but, of course, any of the bones may be infected. The primary focus of infection is always in the marrow and is carried through the cortex by the Haversian Canals to the periosteum. The bacteria produces a soluble toxin which causes a necrosis

of the marrow and bone, and extension takes place through the Haversian Canals involving the cortex and periosteum, which produces a sub-periosteal abscess, and which, if left alone, ruptures into the soft tissue and forms an abscess in the muscles and tissues of the part infected and which may rupture through the skin and cause sinus formation, which may persist indefinitely until all the necrotic bone has been absorbed or discharged through the sinus.

The epiphysis is rarely invaded. This is due to the strong resistance of the epiphyseal cartilage to the invasion of the organisms. If the epiphysis does become infected there is a rapid extension to the joints and there is a marked destructive process of the joints.

Repair takes place by granulation tissue being formed by the marrow which proliferates and is changed into scar tissue and aids in the localizing of the infectious process. The endosteum forms new bone tissue; the cortical bone has no regenerative powers. Its vitality and regeneration is dependent upon the periosteum and Haversian canals. Necrosis of the cortex is caused by the destruction of the periosteum and is the chief cause of the persistence of sinuses. After the inflammation has subsided proliferation of the periosteum tends to prevent the death of the cortical bone. The periosteum forms new bone cells which surround the cortex and is called the involucrum. The dead cortex or sequestrum is enclosed in a space of new bone tissue, which is called involucrum. This space is lined with granulation tissue and with the dead bone which is present keeps up the discharging sinus which persists until the bone is absorbed or until some surgical means removes the sequestrum.

Pain is the earliest and most important of all symptoms. It comes on acutely; it is severe over the point of infection. The point of infection can be localized by the seat of pain. It is severest on constant deep pressure and is always above or below the joint. There is some infiltration of the soft structures surrounding the bone and if the condition has progressed to the formation of abscess in the soft tissue there are all the local signs and symptoms of superficial inflammation. Joint tenderness is usually present, but is not so pronounced as is rheumatism. Fever comes on early and is usually high, 103 to 104. The pulse is rapid, toxemia at times is very profound. There is always an increase of the leucocytic count.

Differential Diagnosis

First: Tubercular joints.

In tuberculosis of the joints the infection develops insidiously.

There is not the acute, sudden, and severe pain in tuberculosis as in osteomyelitis. The pain is referred to the joints and not to the shaft of the bones.

In articular rheumatism the tenderness and pain is directly in the joint. Movement of the joint is extremely painful; the tender point is directly over the joint line and there is multiarticular involvement.

The history of gonorrhea explains gonorrhea rheumatism and differentiates it from acute infectious osteomyelitis.

The toxemia of osteomyelitis that has been very severe and is often

misleading, causes us to think of typhoid infection. The history of the patient will usually clear up the diagnosis aided by laboratory findings, such as Widal and blood culture tests.

Actinomycosis is gradual in the onset and does not have the severe pain and toxemia of the acute infectious osteomyelitis and differentiation can easily be made by the use of the microscope by finding the ray fungus.

The X-ray is of very little value in diagnosing acute infectious osteomyelitis in the first few days of infection because there has not been sufficient bone destruction, but is helpful in the late stages of the infection and in differentiation from tuberculosis of joints.

The prognosis depends upon the number and virulence of the organisms, the local and general resistance of the patient, early recognition and prompt and effective treatment. The massive infections are always serious. The toxemia may be very grave and cause the death of the patient. If treatment is not begun promptly the infection becomes chronic and drags on for months and years; Amyloid complications may set up in various organs of the body and result in death. Besides all this there may be partial or complete loss of the function of the part affected or there may be marked deformity.

Our forefathers in surgery recognized the condition of Whitelow or felon—which is acute infectious osteomyelitis of the bones of the phylanges and to them the treatment was all that was desired to effect a prompt cure—incision and drainage. It is surprising that they did not apply the principle of this treatment to the same condition of the femur, tibia or any of the other bones of the human skeleton. They did not and it remained for later surgeons, notably Murphy among the first, to apply this principle of treatment and to teach it.

Treatment

Murphy taught us years ago when acute infectious osteomyelitis was recognized early that a small incision should be made down to the bone and with a gimlet he drilled a hole into the marrow at the point of infection, which, in the majority of cases caused immediate relief of symptoms and resulted in the prompt recovery of the patient. The principle of treatment is prompt and efficient drainage; in primary operations surgery should not be radical; all that is necessary is to establish drainage; this can be done by drilling holes into the infected bone marrow. A curette, a chisel and a hammer should not be used in the majority of early cases because of the injury done to the bone. Surgeons frequently do more harm with a curette, a chisel, and a hammer in a few moments of work than the infection would do in months if the patient were properly treated and nature left to do her surgery of localizing the infection which may clear up the infection entirely or result in sequestrum formation. In chronic type of infection, of course, all necrotic bone or sequestrum must be removed thoroughly if a cure is to be expected. In certain cases it becomes necessary to do a complete subperiosteal resection of the shaft of the infected bone and its restoration with grafts or transplantations of bone. The local treatment

must be combined with constitutional treatment, environment, hygiene, foods, etc. Various vaccines and serums have been used, but without any definite success.

Case History

No. 1: White boy 11 years of age, injured his right tibia jumping a rope. Four days later he was seized with a severe pain in the shaft of his tibia and had high fever, chills and sweats and was treated for rheumatism by his physician for six weeks. During this time the infection ruptured through the cortex and periosteum and formed an abscess into the soft structure of his leg. The treatment consisted of incision and evacuation of the pus in the soft tissue and removal of the sequestrum, the cavity in the bone was cleaned with iodine and packed with iodoform gauze. In two months there was complete recovery.

Case 2: White boy, 9 years of age, fell and injured his right femur. Three or four days later he developed a severe pain near the junction of the middle and lower third of the femur, he had high fever, chills and sweats and was treated for rheumatism by his physician for nine weeks. When admitted to the hospital he had an abscess in the soft structure of the leg and necrosis of the femur. Treatment and results were the same as in the first case.

Case 3: White man, age 30 years, struck his right femur with a hammer; one week later he was seized with a severe pain in his right femur, had high fever, chills and sweats, his condition was diagnosed in a week's time by his attending physician and was referred to me for treatment. An incision was made down to the bone; a subperiosteal abscess was present. No sequestrum had formed and drainage was secured by drilling holes into the infected part—the wound was kept open with iodoform gauze and the patient made a complete recovery in six weeks.

Case 4: White man, age 32, had a boil on his right knee and was taking an automobile trip during his vacation this summer. He was driving his car with his sleeves rolled up to his elbows. Upon his return to his home, the following day he was seized with severe pain in the shafts of the left radius and ulna; he called upon his family physician who made a diagnosis of rheumatism and prescribed salicylates. This man was under his physician's care for four days and then he saw fit to change physicians. The diagnosis of acute infectious osteomyelitis was made promptly, the marrow of both bones was drained by means of drilling holes in them. The infection promptly cleared up in a few weeks.

These are just a few of the cases which have come under my observation. They are merely cited to illustrate the importance of early diagnosis and treatment and are typical of the clinical mistakes made in this very grave and serious disease.

PHYSICAL SIGNS IN INCIPIENT TUBERCULOSIS

By ALBERT H. HOGE, M.D., Bluefield, W. Va.

Read Before the Mrcer County Medical Society, Novmber 28, 1921.

Realizing full well the great val-

ue derived from the X-ray and fluoroscope in the study of chest diseases, and with no intention of underestimating the great aid often received from these wonderful instruments, I am firmly convinced however, that we are depending entirely too much upon them, rather than upon a careful physical examination, thereby making of ourselves poorer diagnosticians.

Norris and Landis in their latest work point to the fact that clinicians are not in agreement as to the superiority of the newer over the older method and between the clinicians and the roentgenologists there is a wide breach. The latter, with a few exceptions, arrogate unto themselves an ability to recognize eraly tuberculous lesions in the lungs which is not warranted. In the first place the earliest manifestations of tuberculosis as shown on the roentgenogram, are not distinctive. Many simple chronic infections will give the same picture.

Again, as Fredrich Muller, Holzknecht and others have pointed out a deposit of a few early tubercles with accompanying catarrh, and which constitute an anatomically incipient case, will not cast a shadow on the plate. Active dry pleurisy also gives no hint of its presence whatsoever, so far as the roentgenogram is concerned.

Many roentgenologists claim that an early utberculous process is distinctive without realizing that other infectious processes of the lung, of whatever character, generally spread along the course of the air passages. As Baetjer has pointed out, these become inflamed and, as in all inflammatory conditions, they produce reaction, consequently the fibrous sheath which surrounds the bronchi, artery, vein and lymph channels become thickened. It is just this type of cases that it is so important to make an etiological diagnosis. Although the clinical evidence and the physical signs in such cases may be inconclusive, the roentgenogram is equally so, for while changes may be shown in the plate, it is impossible to state whether they are due to tuberculosis or some other infection.

It is only when the tuberculous lesion has become sufficiently advanced that a definite opinion can be given as to its nature. When this point has been reached an appeal to the roentgenogram is not necessary as all the signs and symptoms of the disease are apparent from the clinical side.

The fact that incipient pulmonary tuberculosis is amenable to treatment and that under judicious management it can be arrested or cured, entails great obligations upon the practitioner of medicine to possess himself of every important item of information leading to a correct diagnosis of the affection in its very early stage.

Far from under estimating the value of recent aids to diagnosis, I am a firm believer in the supremacy and superiority of physical diagnosis in incipient pulmonary tuberculosis.

This paper deals with those physical signs which are found in early tuberculosis of the lungs and which either singly or combined point to the road to a positive diagnosis.

The most convenient way to study the subject is to follow the anatomical division of the lungs, namely; apex, middle and base. This method of study is advantageous also from the fact that each

division has some anatomical and physiological features peculiarly its own. The modification or preservance of these peculiarities are guides both in disease and in health.

It is universally recognized that the apices of the lungs are most often the seat of beginning tuberculosis. In view of this predilection for the apices, it behooves the examiner to make a careful study of the anatomical and physiological difference between these upper projections of the lungs in a state of health.

Right Apex

Dullness on percussion; broncho-vesicular breathing; voice present and distinct; tactile fremitus present; whispered sound present and distinct.

Left Apex

Normal vesicular resonance; vesicular breathing; voice absent or indistinct; tactile fremitus absent; whispered sound muffled and ill defined.

The importance of a knowledge of these normal differences between the apices become at once apparent. For if the accoustic conditions of the normal right apex exist in the left apex, the latter is diseased beyond a shadow of doubt.

To what extent must the normal physical condition of the right apex change to signalize incipient tuberculosis?

The following are the changes: The percussion note changes from dullness to flatness. This statement, however, requires qualification. The changed note is not absolutely flat such as found over the superficial area of the heart or liver, or over complete consolidation of lung tissue. The note is more flat than dull. That is about as near as one can describe it.

The breath sounds show unmistakable change. The normal broncho-vesicular type of breathing assumes the bronchial or tubular character. Expiration is prolonged and distinctly hollow. The whispered sound, which is normally soft and plain, assumes a cavernous distinctness and grating harshness. This grating harshness of the whispered sound is characteristic of an early infiltrated tuberculous area of lung. It has the following peculiarity. When the patient counts one, two, three, the "two" will sound harsh and grating while the other numbers are only loud and distinct.

The change in the vocal sound is not sufficiently altered to be of marked help in diagnosis. Nor is tactile fremitus so changed as to be of value. These deviations from the normal accoustics of the right apex indicate that it is the seat of incipient tuberculosis.

In this connection it may be proper to state that the best way to perceive and appreciate vocal and tactile fremitus over either apex is to place the tips of the index and middle fingers over the supraclavicular space, not, as it is commonly done, by using the palms of the hands.

Two exceedingly important signs of early apex tuberculosis common to both apices, are (1) a mucous click at the end of inspiration, and (2) a squeaky sound with either inspiration or expiration.

The click or the squeak, heard in the apex only, is, to my mind, an absolute indication of the presence of an incipient tuberculous infiltration plus bronchial catarrh.

The two signs are sometimes found together and sometimes alone, the important point to remember is that each one is pathognomonic.

Another of the signs common to both apices is the jerking or interrupted, or cogwheel respiration. This form of breathing when heard over an apex, in a patient who understands how to breathe is of unquestionable diagnostic value, but it is not a frequent sign in incipient tuberculosis, while it is a frequent respiratory phenomenon in nervous hysterical and stupid patients.

The last of the physical signs of incipient tuberculosis to mention, but by no means the least in importance, is the accentuation of the pulmonic second sound. And for the sake of avoiding repetition later in this paper, I will state that no matter where the lesion is located, apex, base, or elsewhere in the lungs, this sign is always present and always helpful. To avoid error in its interpretation, however, pulmonary emphysema and diseases of the mitral valves must be excluded, for the reason that these diseases are accompanied by a pulmonic accentuated sound.

The following is a summary of the physical signs and a statement of the order of their relative importance, as they are found in the apices:

Left Apex: Mucous click; sonorous squeak; increased whispered sound; broncho-vesicular breathing; dullness on percussion; accentuated second pulmonic sound; jerking respiration; vocal sound and tactile fremitus.

It must be observed that not all of these signs need be present or are present, to enable one to make a positive diagnosis of incipient tuberculosis of the apex. It may be argued though not conclusively, that when all of these signs are found in the left apex, that the lesion has passed the stage of incipiency. However, two or three of the more important signs are amply sufficient for diagnostic purposes and in the presence of a mucous or sonorous rale, all other signs are merely corroborative. Some caution is necessary to elicit some of the signs properly. Percussion should never be made with much force. A hard stroke will produce aeration of the apex so that the slight dullness which is expected may be turned into tympany, or it will be lost in the echo of the blow. Gentle percussion is the best.

Increased whispered sound, which is so valuable a sign, should be obtained in the outer two-thirds of the left supra-culavicular space. Beyond this point, the sign is of little value as it is transmitted from the larynx and trachea.

The examiner will do well to make sure that these signs, whether they are present in twos, or threes, or more, are heard both in the left supra-clavicular and supra-scapular spaces. The observance of this point is of the utmost importance.

Now the Right Apex—The difficulty here is considerably greater than in the left apex because, as it was stated above, that what is pathological in the left apex is physiological in the right apex.

We begin with the absolutely pathognomonic signs and which are normally foreign to the right apex, namely: mucous rale or click; sonorous or squeaking adventitious sound. Next to these are; the altered breathing, increased whispered sound, and the dull-flat per-

cussion note. Of these the altered breathing characterized by a prolonged and hollow expiratory sound is the most important. To all of these, however, must be added the accentuation of the second pulmonic sound.

I have found the changed condition of the right apex, brought about by incipient tuberculosis has caused me more worry and difficulty than anything in physical diagnosis. It is difficult to grasp the difference between normal and abnormal sounds. In fact the difficulty and despair could be extended to the whole chest. As the difference is but a question of degree, comparison is an all-important factor in that study.

When in doubt as to what constitutes normal vesicular breathing, reference could be made to supra and infra-clavicular spaces on the left side of the chest as well as all the way down the great majority of cases, to the lower lobes.

When in doubt as to what constitutes broncho-vesicular breathing reference could be had to the right apex; to the second intercostal spaces close to the sternum and to the infra-scapular spaces between the seventh cervical and fourth dorsal vertebrae. The most characteristic tubular or bronchial breathing can be heard over the larynx and trachea.

When in doubt as to what constitutes dulness, reference could be had to the right apex about a finger's breadth below the right clavicle; the deep area of the heart and upper part of the liver.

The superficial area of the heart, the lower part of the liver and scapulae are splendid places for the study and comparison of flatness.

The right middle lobe is not exempt from tuberculosis, but the rarity of the occurrence of incipient tuberculosis in that lung must be very great.

In the examination of the infrascapular spaces for the seat of an incipient tuberculosis infiltration it is well to bear in mind that this thoracic area is characterized normally by dullness on percussion, broncho-vesicular breathing, voice whispered sound. A diagnosis of incipient tuberculosis can here be made with certainty when the normal features are exaggerated, or when mucous and sonorous rales are persistently found there, and there only.

In concsidering the physical evidence of incipient tuberculosis involving the lower lobes, it is again important to point out anatomical and physiological differences. Fortunately they are very few.

The right lower lobe is about an inch shorter than the left. Owing to this peculiarity, during deep inspiration when both lower lungs descend from an inch to an inch and a half the lower borders of these lobes, the left lobe will descend lower than the right.

The second peculiarity worth remembering is that in a few normal chests, broncho-vesicular breathing is normally heard at the base of the right lung.

The most frequent first physical sign in these parts of the lungs is moist rales of medium size. The area affected is always limited and circumscribed. The rales are very persistent. The second important as well as frequent sign is the increased whispered sound. Then comes dullness on percussion and lastly vocal and tactile fremitus. If

one was to choose two signs to rely upon making a diagnosis, the two would be mucus rales and whispered sounds.

There are two other signs of great value which are, however, seldom mentioned by writers on the subject. Both signs are produced practically by the same cause, namely: Infiltration of the lung, but they can be elicited in two, different ways. One is the restriction of the diaphragm shadow, known as Litten's phenomenon.

Under normal circumstances the shadow moves up and down on either side of the chest about two and a half inches. During forced breathing the excursion of the shadow occupies three and a half inches. When either lower lobe is infiltrated, its descent is markedly impeded so that on the affected side either the diaphragm shadow is very restricted or is entirely absent.

The second indication of an incipient infiltration is the absence of normal vesicular resonance obtained on percussion during deep inspiration which normally extends from one and a half to two inches beyond the lower borders of the lungs.

In making sure that the diaphragm and the restricted descent of the lower lobes are due to tuberculosis, it is necessary to exclude pleurisy with adhesions and effusion in the pleural cavity and tumor of the lung or pleura.

Announcements and Communications

REPORT OF COMMITTEE OF BOARD OF TRUSTEES AND JUDICIAL COUNCIL ON CIRCULAR ISSUED BY "MEDICAL ADVISORY COMMITTEE."

At its meeting held at the Association headquarters, February 2, the Judicial Council considered, among other matters, a printed letter recently circulated widely by a "Medical Advisory Committee" This letter was specifically addressed to the secretaries of component societies of the American Medical Association; with it were a preamble and resolutions which these societies were asked to adopt. The Council deemed it advisable to discuss the matter with the Board of Trustees since that body was in session. The Council presented the matter to the board, pointing out that even though the matter emanated from a committee whose origin and membership had not been revealed, the communication had been considered by a few component societies as sem-iofficial in character and acted on as such and recommended that an official statement be published. After due consideration a committee consisting of the chairman and secretary of the Board of Trustees and of the Judicial Council, respectively, was appointed to formulate a brief statement for publication in The Journal. The statement follows.—Editor.

Statement of the Committee

Recently there has been circulated an open letter signed by a "Medical Advisory Committee" and addressed to the component county societies of the American Medical Association. This letter with its accompanying preamble and resolutions was published in The Journal January 21, 1922, page 198, to-

gether with correspondence relating to the subject. The circular presents six postulates:

The public and the profession are being sold out to:

1. Foundation control of "full-time" medical education.
2. Lay board domination and the "closed shop" hospital.
3. Socialized state medicine, subsidized community health centers and hospitals under political or university control.
4. Legislative dictation of therapy and fees.
5. Demoralization of medical standards by the expansion of cults.
6. Exploitation of the specialties by lay technicians.

These postulates call attention to certain conditions, existing and anticipated, some of which are detrimental to the public welfare and a menace to the practice of medicine, and it is charged at the same time that the existence of these conditions is due to "so-called leaders" in the Association. A method for correcting the evil is suggested, namely: The instruction of the representatives to the House of Delegates of the American Medical Association to support three specifically named propositions:

A. A change of policy and leadership in the A. M. A. pledged to the immediate abolition of the evils mentioned, and constructive protection of medical interests.

B. The repeal of multiple representation and plural voting privilege by section delegates.

C. The election of trustees for a period of two years; five trustees to be elected one year, and four the next, to prevent the trustees from perpetuating oligarchial rule.

Had this "Medical Advisory Committee" called attention to the conditions without exaggeration and made constructive suggestions for combatting them, it would have deserved praise. But harm, not good, lies in the manner in which the subject is presented and in the unwarranted accosations made in the body of the letter against the Board of Trustees and the officers of the association. The tendency of this communication is to breed discontent, suspicion and disloyalty at a time when there is great need of calm, deliberate consideration of how best to check certain dangerous tendencies affecting the practice of medicine and to remedy serious conditions that already exist.

The charge that the House of Delegates, the Board of Trustees or that the leaders of the association have promoted or in any way fostered the conditions named is submitted without evidence and is without foundation.

The officers, the trustees of the association, the various councils and a majority in the House of Delegates are aware of the conditions referred to in the postulates. Some of these conditions primarily require correction by local and state medical organizations, the national association co-operating.

Inferentially at least, the Board of Trustees is the body that is held blamable for the alleged sins of omission and commission, since one of the remedies proposed is shortening the term of office of the members of the board, disregarding the fact that consideration of the problems presented by the six postulates falls primarily within the jurisdiction of the House of Delegates, not

of the Board of Trustees, and that it is the function of the various councils and committees, having jurisdiction, to carry out the specific policies formulated by the house. These councils and committees are directly responsible to the House of Delegates, not to the Board of Trustees.

The question of the election of delegates by the sections is one which must be decided by the House of Delegates itself. Such representation has been in existence since the reorganization of the association, and it is presumed that good reasons existed for providing it. The charge that these delegates have acted as an organized bloc against the best interests of the profession demands incontrovertible proof.

The communication, both in language and in spirit, is destructive in character. What is needed are well-thought-out suggestions as to the best method of combating the veils that threaten public and professional welfare and which will tend to build up and not to destroy. The undersigned committee recommends to the members of component county societies that they give careful study to the whole proposition before adopting any resolutions or making any recommendations to the House of Delegates of their state associations. It is earnestly recommended that the House of Delegates of each state association select as representatives to the House of Delegates of the American Medical Association men who have given thoughtful consideration to these subjects and who have primarily at heart the best interests of the public and of the medical profession. It is believed that the efforts of organized medicine will be successful in the correction of evils which threaten the economic status of the medical profession and the welfare of the public in proportion to the general ethical standards which the members of the profession follow in their own professional and social relationships.

W. T. SARLES, Chairman Board of Trustees.

FRANK BILLINGS, Sec. Board of Trustees.

M. L. HARRIS, Chairman Judicial Council.

A. R. CRAIG, Secretary Judicial Council.

Dartmoor, W. Va.,
Feb. 6, 1922.

Dr. Jas. R. Bloss, Editor,
Huntington, W. Va.

Dear Doctor:—

At our January meeting of the B.-R.-T. Medical Society in Elkins, the proposed plan to establish a four year course of medical college work at the University of West Virginia was discussed.

Some holding that the endorsement of the plan, by the delegates at the meeting of the State Society last May, without the knowledge or instructions from the component county societies, was premature and ill advised and desired that a concensus of the opinion of the physicians throughout the state should be obtained.

With that view the secretary was was directed to prepare and send out a request card with a return card, so as to learn the feeling of the physicians.

The secretary was further instructed to ask all the secretaries of component societies throughout

the state to take similar action.

I am sending the form of card we used. Will you please publish the same and give the societies an idea of our plan. That we may have a free expression.

Yours truly,
J. C. IRONS, Secy.

January 26, 1922.

Dear Doctor:—

Presuming you know of the effort to establish a four year course medical college at University of West Virginia, as well as to the probable cost to erect suitable building, equip and furnish such an institution, and after, to supply a teaching force; the need of such a college, and the probable support.

The society wishes to ascertain the opinion of all its members. Will you please sign the return card by answering Yes or No and sign your name.

J. C. IRONS, Secy.

Do you favor a four year course medical college? Yes or No!

Name.....

Date.....

March 23, 1922.

W. Va. Med. Jour.,
Huntington, W. Va.

Gentlemen:—

Enclosed is an advance proof of an editorial on "Pre-Medicated Alcohol," which wlil appear in the April issue of The American Journal of Clinical Medicine.

The pending legislation on this matter is of vital importance to the medical profession, to the teaching of pharmacy, and to manufacturing pharmacy.

We sincerely trust that you will take the matter up editorially, at the earliest possible moment, and send marked copies to us.

Very truly yours,
S. DeWITT CLOUGH,
Chairman Publicity Com.

PREMEDICATED ALCOHOL

A plan on foot in Washington which, to the average physician, may sound reasonable and possibly desirable, is to permit the use of denatured, or, as it has been dubbed, "premedicated" alcohol for use in remedies intended for internal administration. Perhaps we would be more inclined to look with favor upon this proposal if it came from some other source; but, in view of the fact that it is being sponsored by the proprietary medicine interests, we feel like scrutinizing it pretty carefully.

The plan in a nutshell is this: Alcohol used in medicine shall be "premedicated" with one or more of the ingredients used in that medicine, and when it is so premedicated, it shall be free from tax.

Sounds reasonable enough, doesn't it? But stop a minute and analyze the situation. First, what does this mean to the proprietary medicine manufacturer? It means simply this: Most of his goods are sold at fixed prices per bottle. If he can get his alcohol free the "spread" between cost and selling price will be greatly increased, also his profits. Such an arrangement would put thousands of dollars annually into the pockets of every man or firm manufacturing a patent medicine selling at a fixed price.

Simple enough when only one or two preparations are con-

cerned. But, before passing judgment, turn to the other side of the picture. The pharmaceutical manufacture puts out 500, 1,000 or 2,000 different alcoholic preparations; in other words, instead of having to deal with one or two, or even half a dozen formulas of denatured alcohol, he would have to have as many, or nearly as many alcohols as he has preparations. This means an enormous stock of alcohol on his shelves, and large capital tied up. Consequently, the saving to the consumer would ncessarily be small.

Furthermore, our official tinctures, elixirs and fluid extracts are made according to methods developed by the experience of one hundred years or more. In some of these preparations, pure alcohol is used; in other, 10 per cent alcohol; different dilutions, according to the solubility or physical properties of the drug to be treated. For instance, in denaturing or premedicating digitalis with 95 per cent alcohol, we get quite a different preparation than we should if the strength of alcohol required in the pharmacopeia were used.

Still further, the scientists interested in the development of the pharmacopeia, such men for instance, as Dr. Fullerton Cook, chairman of the Revision Committee of that official book, declared that, to adopt a plan of premedication like this would endanger our official standards of hundreds of preparations and make the book itself a joke.

And, still further, the "premedication" or dilution of the alcohol would be done in the distillery, by the distillers employes and not by pharmacists and others trained in the handling of pharmaceutical preparations. The scientific control over the manufacture of these drugs would be lost.

It seems to us quite clear that the only one who would benefit by "free" and "premedicated alcohol" of this kind would be the manufacturer of such preparations as S. S. S., Tanlac, and Lydia Pinkham's Compound. The price to the doctor and his patient would not be greatly affected, while the character of preparations which he uses would be seriously endangered. Incidentally, the government would lose about $20,000,000 of revenue annually.

I am sure that no physician who understands the situation would for a minute think of endorsing a dangerous plan of this character. Why not tell your congressman how you feel about it, and ask him to report to the proper authorities.

A group of well known Huntington doctors have taken possession of the second floor of the new Frantz building, 1111 Fourth avenue. They have a general reception room, individual consulting rooms, an operating room for minor surgery and a rest room for patients.

In the group are Dr. E. D. Wells, eye, ear, nose and throat specialist, Dr. J. C. Ford, Dr. C. P. S. Ford, general practiitoners; Dr. W. Byrd Hunter, specialist in the disease of children; Dr. R. E. Petty, dental X-ray and extraction specialist, and Dr. W. W. Petty, dental surgeon.

THE WEST VIRGINIA MEDICAL JOURNAL

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J. E. RADER, M.D. Assistant Editors.

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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ANNUAL MEETING THIS YEAR

The date has been fixed for May 17, 18 and 19.

So far we have had no communication from the secretary, Dr. Ashworth, as to the progress being made in the arrangement of the program. That it will be a good one goes without saying for the work has steadily grown better year by year. But it is essential that he have the subjects for addresses as soon as is possible. At the last moment our members cannot get these printed in the program.

The various committees of the Cabell County have been appointed and are working out the details for your entertainment. These will be announced at a little later date.

It is to be hoped that the attendance this year will be a record-breaking one for we would be glad to have every member of the State Association for our guests.

Make your plans to come to the state meeting on your way to St. Louis to attend the A. M. A.

MEDICINE AND SCIENCE

Recently an editorial appeared in the journal of a science closely associated with medicine, which caused a pause in the course of the day's work. This editorial as it appears to me, was a severe arraignment of we medical men as scientists. And yet it seems to be, to me, a very socialistic arraignment. Always I have felt that even in the practice of our most God-given profession there were some for one thing, some for another. All of us may be close of observation, some of us may have that type of mind which makes us wish to delve into the purely scientific side of our profession. Still others wish to take the results of our scientific members and go out into the highways and by-ways and hedges and apply these wonderful things to the lame and the halt and the blind.

Shall I say that no honor shall be given to the laboratory men, the scientist, the Pasteur? No, I say all honor to him. Shall a Carrell not be honored because he has shown that blood vessels can be anastomosed? No, but shall others who have applied his wonderful work to the ill and injured among humanity be criticised because they use his great advice? That is not fair either.

Some of us are fitted for one thing, some for another. Wonderfully brilliant physicians may be totally unable to treat a "sick person." Why is it? Others of us can take the discoveries of these "scientists" and use them. Should either of us criticise the other?

One may be content to fight the difficult battles of the laboratory; the other gladly fights a case of appendicitis, the croup (of one kind or another) or just a plain "belly-ache" and is happy to do good. Oh, why cannot we be kind to one another and be tolerant and see the other fellow's side of it? We need each other so very much, and yet we fight among ourselves.

THE OBSETERICAL HAZARD

Mortality statistics recently given out by the Federal government at Washington show an alarming condition from an obstetrical point of view. In the registration area included in these statistics, the puerperal death rate was close to 15,000 mothers. More than half these deaths were due to puerperal septicemia and eclampsia, while the accidents of pregnancy and labor gave the next largest toll, which was over 4,000. Nothing is said about the morbidity, which can scarcely be estimated.

Statistics from the Texas State Health Department show that in 1920 there were 176 deaths from puerperal septicemia. At the same time, deaths from malaria numbered 529, diphtheria 458, typhoid fever 447, measles 84, and scarlet fever 36. In Georgia in 1920, there were 186 deaths from puerperal septicemia, while the deaths from malaria were 137, diphtheria 94, typhoid fever 152, measles 40, and scarlet fever 17, which figures we happen to have before us.

Analyzing these statistics, we at once recognize that there is inefficiency or carelessness somewhere. Probably carelessness plays the larger part. Prenatal hygiene properly conducted, that is, teaching the mother the hazards connected with child bearing and instructing her as to the symptoms of eclampsia and the methods that should be used

before, during and after labor, to prevent accidents and infection, would undoubtedly lower this mortality and morbidity. The accidents of pregnancy and labor must be corrected by developing in the physician more efficiency in this department of medicine. Co-operation between the patient and obstetrician should be courted, to enlist the interest of the patient in the welfare of herself, her baby and the community. This can be largely developed by personal instruction to the patient. She should be made to realize that she can assist materially by co-operating with her doctor.

Statistics show that the number of deaths in the newborn are unusually heavy at birth and under one day of age. Probably more than twenty per cent of the babies that die during the first year of life die within the first twenty-four hours after birth. The most frequent causes of these deaths during early life are, asphyxiation, premature birth, malformations, injuries at birth and bronchopneumonia. The latter is frequently due to the aspiration of mucous laden with germs from the birth canal.

Should the medical profession reflect upon the existing morbidity and mortality, it would at once see certain problems confronting it which, if properly solved, would materially reduce this mortality and morbidity. The profession is informing the public on tubreculosis, cancer, hookworm and child hygiene, why not include maternal welfare? And why should not better obstetricians be developed? Statistics are an indictment of the medical profession. More efficiency in obstetrics is demanded by the public. Probably the teaching of obstetrics in our medical schools has been more or less neglected for other branches. Sufficient emphasis, up to within the last few years, has not been put upon this department in the curriculum. Every medical school should have an outdoor obstetrical department, properly conducted and supervised, so that the student during his senior year, may experience an ideal clinical as well as pathological course in obstetrics. He should deliver many patients. The cases should have histories properly written and graded, and clinical conferences reviewing the work which he has done, should be held. The student should have access to a well regulated obstetrical department in a hospital, where the more difficult cases may be presented. More students should be encouraged to affiliate themselves with hospitals during their internship, which have well regulated maternity services, that they may assume the responsibility that is not now ordinarily given to a senior medical student.

Better preparation of the medical student, a realization by physician and patient of their mutual obligations and responsibilities, and an appreciation by the public of the importance of obstetrics, would save many lives and greatly improve the health and therefore the welfare of the public.—Texas State Medical Journal.

County Society Reports

The Barbour - Randolph - Tucker County Medical Society met in Elkins on January 19, 1922, the following members being present:

Drs. Butts, Bosworth, A. S. Pierce, Perry, Gray, Golden, Moore, S. G. and Irons.

Dr. Pierce presided. After reading and correcting the minutes, the following was the action of the society: The circular letter purporting to be from the Advisory Committee, American Medical Association, was read, and as the authors were unknown to the society, and the statements contained not being understood, the paper was laid on the table, and the secretary was instructed to write the authors of the circular, and also to the editor of the American Medical Association Journal for full information as to complaints as to the ring rule of the National Medical Society. Complaints being made that the proposed "four year medical course" college at Morgantown, W. Va., was ill advised and impractical and the action taken by the state society was without the previous knowledge of the medical societies of the state, and the delegates not having been authorized therefore to get the true sentiment, the secretary was directed to write each member of the society to ascertain the wish of the members; and also to write the secretaries of the co-ordinate societies and ask that they co-operate in getting the sentiment throughout the state. The vice-president and censor of last year were re-elected. Dr. S. G. Moore was elected a delegate to the State Medical Society, Dr. A. S. Bosworth alternate.

Dr. A. P. Butt was appointed to prepare a memorial of Dr. W. W. Dear, who died at Parsons, W. Va., of pneumonia, on January 15, 1922.

Treasurer's report read and approved.

Under suspension of rules Dr. E. R. Logan of Davis, was elected a member of the society.

The president-elect, Dr. Pierce, then made a short address. He especially called attention to the irregular practitioners, mentioning the chiropractors as the chief offenders, in violating openly specific laws. He also called attention to the evil of druggists quasi-prescribing proprietary and patent medicines, with all this false claims as to curative qualities, and with no knowledge of the diseases for which they were being recommended. He also said he had reason to believe druggists were, either directly or indirectly prescribing for gonorrhea, etc.

The secretary was directed to write Dr. F. F. Farnsworth and inform him of this practice, and also to wrie the druggists in Elkins as to the complaint, and advise them of the society's protest against this most pernicious and illegal practice.

The society then discussed the new remedies used within the last year. Many "highly lauded cure-alls" were positively condemned as useless and expensive, while some were proven to have great merit.

The society adjourned to meet in Elkins in April.

J. C. IRONS, Secy.

CABELL COUNTY SOCIETY

January 26, 1922

The society was called to order in the assembly room of the Frederick Hotel at 8:30 p. m. by the president. Reading of the minutes of the previous meeting was dispensed with.

The application for membership of Dr. Arthur S. Jones, with accom-

panying letter from the Academy of Medicine, Cleveland, O., was read before the society and he was admitted to membership by vote.

The application for membership of Dr. W. M. Lewis was also read and referred to the board of censors for approval.

The president, Dr. Bloss, then appointed the following committees to look after the state meeting.

Entertainment: Drs. Rader, Wilkinson, Bobbitt, Neal, Hodges.

Arrangement: Drs. Taylor, Vinson, Vest, Hawes, Moore, T. W.

Finance: Drs. Fitch, L. V. Guthrie, J. A. Guthrie, K. C. Pritchard.

Reception. The society.

Hospital Clinics: Drs. J. A. Guthrie, A. S. Jones, Mark Sutphin, R. J. Wilkinson, C. T. Taylor.

The first named doctor to be the chairman of each respective committee.

The president now introduced the speaker of the evening, Dr. Wm. A. Jenkins, Louisville, Ky., who spoke to the society on The Management of Nephritis.

Dr. Vest opened the discussion and followed by the following men: Drs. Biern, Guthrie, Hubbard, Howard, T. W. Moore, Hawes, Swezey, Wells, Gerlach, Fitch and Kessler.

The paper was excellent and very practical. It was well appreciated and discussed. Dr. Jenkins closed the discussion after which a rising vote of thanks was given and a motion for adjournment was next in order.

Number present 39.

WALTER C. SWANN, Secy.

February 23, 1922.

The regular meeting of the Cabell County Medical Society was held in the assembly room of the Frederick Hotel. The meeting was opened by the president, Dr. Bloss. A bill for stamps was passed to be paid by the society, amount $5.70.

Dr. J. A. Guthrie reported an interesting case of rupture of the gall bladder, on which he operated; the patient recovering. Dr. Rader then reported having seen two such conditions, one recovering. Dr. Wilkinson reports no cases of ruptured gall bladder but added that he sees plenty of ruptured appendices, due to the fault of the general practitioner giving strong pergatives. Dr. Wilkinson is of the opinion that most cases of appendicitis are not going to rupture if the intestinal tract is kept at rest. Dr. Rader states that he also has seen many cases of ruptured appendix and he believes that some of the papers read at the state meeting should be read to the whole society and not to the surgical section alone.

Dr. Guthrie reports for the hospital clinic committee that they will have from 8 to 10 a.m. and if they want 12 to 2 p.m. according to a letter he has received from Dr. Ashworth. The committee will have programs printed giving the work to be seen at each hospital.

Dr. Rader reports committee on entertainment has not met.

Dr. Fitch reports no meeting of the finance committee.

Dr. Beckner and Dr. Marple have been added to the hospital committee.

Dr. Bloss read a letter regarding the coming A.M.A. meeting asking the society to send delegates who would vote for a new set of laws. This letter will very likely come up at the state meeting and Dr. Bloss says he is not in favor of following the instructions or the resolution,

which it carries.

Dr. Wells moved that we send flowers to Dr. Pepper who has been operated on in the Mayo Hospital, the motion carried and a like motion regarding Dr. Rowsey, if he is operated on at the same hospital. Dr. Guthrie suggested we send only a telegram as he thought it would be appreciated more than the flowers.

Dr. Hubbard then read an excellent paper on Radium in Inoperable Carcinomas. Dr. Rader opened the discussion. He has seen Dr. Hubbard treat many cases and he believes that surgery, x-ray and radium offer the best cure for cancers. When radium is used it often renders the inoperable case operable. The thing to do is to educate the public to go early for diagnosis.

Dr. Howard says he thinks all physicians should instruct the patient after child birth to report for examination to see if there are any cervical tears that may develop cancers.

Dr. Wilkinson believes that radium has put a stop to the surgeon operating on the hopeless cases and also brings the patients earlier.

Dr. Fitch thinks the public has exaggerated ideas of radium cures. He thinks it best used in hopeless cases. Asks Dr. Hubbard if radium will cure the benign tumors of breast and warts.

Dr. Wells thinks the surgeon should call in the radium expert in all cases.

Dr. Hubbard in closing says he thinks it a very good idea to let the public get the idea that radium is a cure for they will come for diagnosis much earlier if they think there will be no cutting. Then the patients will often listen to the doctor's judgment about surgery. Tells Dr. Fitch to remove suspicious lumps in breast and send to pathologist.

Adjourned.

Members present were: Drs. Belcher, Wells, Fitch, Rader, Swezey, Guthrie, Taylor, Wilkinson, Willis, Hubbard, Bloss, Swann, Jones, Howard, Sutphin, Yost and Beckner.

RALEIGH COUNTY SOCIETY

The Raleigh County Medical Society convened in regular session Wednesday night, March 1, at 8 o'clock, at the home of Dr. W. W. Hume, Beckley. Dr. J. H. Hoskins, vice-president, presiding. Minutes of previous meeting read and adopted. The secretary was instructed to purchase stationery for the society. Motion made and adopted that all applicants for membership in the society be required to file their applications in a formal manner. Motion made and adopted that the president appoint two delegates to the state society meeting and that these delegates go prepared to read papers before the society. Motion made and adopted that the president appoint a program committee of three, this committee to arrange monthly programs, notify each doctor when he is to read a paper and if the doctor is unable to be at the regular meeting when his paper is to be presented he must forward the paper to the secretary and same will be read before the society. Motion made and adopted that the doctor's located in Wyoming county be extended an invitation to join our society inasmuch as Wyoming county has no medical society. Motion made and adopted that the regular

meeting be on the fourth Thursday of each month in Beckley, Chamber of Commerce rooms, 8 o'clock in the evening, the next meeting to be on April 27. Motion made and adopted that the president appoint a committee of four to revise the fee list and to make report April 27. The following were present: Dupuy, Hume, Wriston, Tieche, Cook, Campbell, Grigg, Hoskins, Smith, D. B. and K. M. Jarrell. A report of several cases which was very interesting was made.

No further business the society adjourned to the dining room, where a most delightful and enjoyable dinner was served. The society, especially the members who were present, feels very grateful to Dr. and Mrs. Hume for their kind and generous hospitality.

CHAS. S. SMITH, Secy.

State and General News

All Pediatrists and other physicians who are especially interested in children and in "Better Pediatrics in West Virginia" and are willing to participate in a "Pediatric Smoker" at some date during the coming meeting of the State Medical Association, with the object in view of considering the organization of a "West Virginia Pediatric Society" for the purpose of co-operating with the State Medical Association, and ultimately when that association has reached the point where section meetings are necessary of constituting ourselves, or being constituted the "Pediatric Section" of the State Medical Association; are requested to so notify the undersigned at an early date that measures may be taken to provide for such meeting and smoker. Let us act quickly.

Any suggestions gladly received.

DR. A. A. SHAWKEY,
231 Capitol St. Charleston, W. Va.

Recently a program of the joint meeting of the Marshall and Wetzel County Medical Societies was received. It was a very fine one and we are sure that it was just as good as it promised to be. On this program appeared the notice that in the future these two societies would meet on the second Tuesday of each month in the county court room at Moundsville.

It is to be hoped that this arrangement will fully measure up to the expectations. We are sure it will and that great benefit will be derived from these meetings by the members of both of these very active societies.

MEDICINE AND SURGERY

BENIGN LESIONS OF THE FEMALE BREAST FOR WHICH OPERATION IS NOT INDICATED.

Joseph Colt Bloodgood, Baltimore (Jour. A. M. A., March 25, 1922) says that in more than half of the last one hundred women whom he has seen because of some complaint referred to one or both breasts, after a history and careful examination, operation has been advised against. The clinical picture of these cases is discussed as a group picture. The cases are classified under pain, painful scar, discharge from the nipple, retraction of the nipple, lesions of the nipple suggesting Paget's disease, history of disappearing tumor, definite and indefinite, single and multiple tumore in women under 25 years of

age, definite and indefinite, single and multiple tumors in one or both breasts in women over 25 years of age. Bloodgood emphasizes the point that the differential diagnosis of breast lesions depends more on palpation than on any other factor in the history and examination. In more than 50 per cent of his patients the diagnosis rests on palpation, and the first question to be answered is, Does the breast contain a distinct lump, or is the lump an indefinite one, and one of many? It should be the invariable rule for the examiner to know nothing of the history of the patient. The history can be taken by somebody else and typewritten. The patient must be told not to say anything to the examiner of what she is complaining, or what she or any one else may have felt. It is important that the examiner receive no suggestion as to which breast the patient thinks is giving trouble, or as to what has been felt by the patient or any other previous examiner. Bloodgood's method is to palpate the two breasts at the same time, the right breast with the left hand, the left with the right hand, palpating corresponding areas, never touching the nipple until palpation is completed. This gives information as to the relative consistency of the same areas in different breasts. Then each breast is palpated with both hands, feeling especially for the edge of the breast. Then one hand is placed on the different parts of the breast and the fingers are moved as when playing the piano, palpating the breast between the fingers and the chest wall. This is the most important procedure and should come last, because by this time areas of congestion will have disappeared. When no distinct tumor can be felt, or when there is one indefinite tumor or more than one in one or both breasts, a second careful examination should be insisted on a few days or a week later, and in some cases repeated examinations. But up to the present in only one instance in which the first examination was negative for a definite tumor has Bloodgood at the subsequent examination made out a definite tumor.

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CO-INCIDENT CALCULUS AND DIVERTICULUM OF THE BLADDER*

*Presented before the Surgical Section of the West Virginia Medical Society at Charleston, May 26, 1921.

JOHN L. CRENSHAW, M.D., Section on Urology, Mayo Clinic,

and

CHARLES B. R. CROMPTON, M.B., (Tor.) Fellow in Urology, The Mayo Foundation, Rochester, Minn.

It is not our purpose to discuss the much argued question of whether diverticula of the bladder are congenital or acquired, but to direct attention to the importance of diverticula in some cases as a factor in the formation of stone in the bladder. Recently a study was made of 609 patients with stone in the bladder who were examined or treated in the Mayo Clinic between the years 1907 and 1920 inclusive. During the same period there were 222 who had diverticula of the bladder of such size or shape as to make them of importance pathologically. Twenty-eight of these 222 patients (12.1 per cent) had diverticula and bladder stone. The diverticula did not include the small depressions commonly known as "cellules" which are found in most retention bladders. They varied in size from 2 cm. or 3 cm. in diameter to large sacs holding many ounces, and in some instances they were larger than the bladder itself. The lateral walls and base were the most frequent areas of communication with the cavity of the bladder, although a few were found in which the opening was in the posterior wall or dome of the bladder. The incidence in women and young men was small, the majority occurring in men who were 50 years of age, or more.

Pathology

Before infection takes place diverticula consist of thin-walled sacs which may be lined with bladder

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mucosa or, as reported by Hinman, the mucosa may be entirely absent, the outer coats being greatly stretched bladder musculature, usually without any continuous well defined muscle layers. At this stage they are but slightly attached to the perivesical tissues and often can be invaginated into the bladder. The stretching of the sac wall renders the musculature more or less atonic and the atony as well as the fact that the mouth of the diverticulum is usually relatively small and located in the upper portion of the sac, favor retention of urine, although the main cavity of the bladder may empty completely. Retention in the sac soon leads to infection with the result that the previously thin wall becomes greatly thickened with inflammatory infiltration, is friable, sometimes necrotic, and densely adherent to all surrounding tissues. The constant overflow of infected urine into the bladder produces a cystitis which may be of such severity that a satisfactory cystoscopy cannot be performed and the mouth of the diverticulum can be overlooked easily.

Formation of stone in the urinary tract is usually attributable to two known predisposing causes, retention and a nucleus for the deposit of urinary salts. Since both of these conditions exist for long periods without the formation of stone, it seems to be evident that there are other factors that have not been proved definitely. It is readily understandable, however, that a diverticulum of the bladder, with retention, infection, and nuclei in the shape of blood clots, desquamated epithelium, pus, necrotic tissue, and so forth, is a fertile field for the formation of stone. The stone may remain in the diverticulum or it may migrate into the main cavity of the bladder.

Symptoms

The symptoms of diverticulum of the bladder and of stone in a diverticulum are alike and essentially those of the co-existing vesical infection, such as frequency, pain, and pyuria, so that a differential diagnosis cannot always be made without the aid of a cystoscopy and the x-ray. A diverticulum can always be diagnosed if the possibility of its existence is recognized by the examiner, but since the co-existing cystitis, stone in the bladder, or hypertrophy of the prostrate are often alone sufficient to account for the symptoms, the possibility of a diverticulum is often overlooked and the further necessary examinations are not made. It has been definitely shown also that a diverticulum can easily be overlooked by a competent surgeon performing a suprapubic cystostomy. There are several conditions, however, that should indicate the possibility of a diverticulum and lead to the examinations necessary for a positive diagnosis.

1. Hemorrhage from the bladder without other assignable cause, the hemorrhage being more profuse than is usual with cystitis or stone and probably the result of severe infection and stretching of the sac walls.

2. A marked slowness in emptying the bladder, the urine coming in a dribble, in the absence of an enlarged prostate, stricture, or lesion of the spinal cord. This symptom is found chiefly with diverticula of large capacity and easily dilatable walls, where the force of

the bladder is directed along the line of least resistance into the diverticulum rather than into the urethra.

3. A very low phenolsulphonephthalein or indigo-carmine output from a catherized bladder, coincident with a normal or nearly normal blood urea, since a portion of the dye may be retained in a diverticulum.

4. Persistent infection or the reformation of stones in the bladder without assignable cause.

5. Shadows in the roentgenograms suggestive of stone in the bladder when stones are not demonstrable on cystoscopic examination.

Diagnosis

Often the diagnosis of diverticulum of the bladder may be made by cystoscopic examination, the mouth of the sac being observed on the bladder wall. Sometimes stones in the diverticulum may be seen protruding through into the cavity of the bladder, usually surrounded by an inflammatory area and granulation tissue. The cystoscopist can sometimes see where the nucleus of a stone, free in the bladder, has broken off from the stone projecting from a diverticulum. If the opening can be seen through the cystoscope a fair idea of its size and location is obtained by coiling roentgenographic ureteral catheter in the sac and making a roentgenogram. In many cases, however, severe cystitis, obstructing prostate, or other cause prevents a satisfactory cystoscopic examination; in these cases a cystogram will usually give the data required.

Technic

A roentgenogram is made of the vesical area; the bladder is then emptied completely with a soft rubber catheter, and the bladder filled comfortably full through the catheter with an emulsion of silver iodid, 2.5 to 5 per cent, or other non-irritating roentgenographic medium. The catheter is then removed and the patient tipped into a semi-Trendelenberg position. Several plates are made of the bladder at different angles, so that if a diverticulum is present the shadow will not be projected on the shadow of the full bladder in all the plates. The patient then voids, or if there is retention he is catheterized, and another roentgenogram is made which should show the outline of the diverticulum, the amount of retention in it, and whether or not shadows suspicious of stone are included in the diverticulum. With this technic a positive diagnosis can be made in almost every case. If there is a question of whether the shadows are in the ureter or in the diverticulum, the ureters can, of course, be excluded by means of lead catheters or a ureterogram.

Treatment

The removal of a stone from the bladder when a diverticulum is present, or of a stone from a diverticulum, is not sufficient, since, if the original source of the stone remains, a recurrence is to be expected. The diverticulum may be removed at the same time the stone is removed, or as a secondary procedure. The same pre-operative preparation should be employed as for prostatectomy, namely, removing the retained urine, clearing up

infection, and building up the general health. In cases of large, foul diverticula it is often necessary to obtain drainage by suprapubic cystostomy and by tubes fastened into the diverticulum and into the bladder. A suprapubic excision of the sac and suture of the wall of the bladder are usually indicated. Whether this can be accomplished from the bladder side by invaginating the diverticulum into the bladder after the manner of Young, or whether the sac must be dissected free from the outside and the pocket it occupied drained, depends largely on the amount of infection and adhesions. Judd has pointed out that care must be taken in dissecting in order to avoid the ureter and vas which are often involved in the adhesions. It may be necessary to transplant the ureter into another portion of the bladder. The extravesical dissection is facilitated by a finger in the diverticulum (Judd), by distending the diverticulum with gauze (Lower), or by a rubber bag (Lerche). In the occasional case in which the diverticulum is shallow and the orifice small sufficient draniage can be obtanied by enlarging the opening by a plastic operation or by fulguration through a cystoscope. The bladder in most cases is thick walled, with foul or even gangrenous cystitis.

Mayo Clinic Series

The cases in this series are divided into three groups: Group 1, stone in the bladder without stone in the diverticulum, thirteen cases Group 2, stone in both the diverticulum and the bladder, nine cases Group 3, stone in the diverticulum alone, six cases. The total is twenty-eight, 12.1 per cent of the 222 cases of diverticula.

Twenty-seven of the twenty-eight patients were males. The one woman in the series had a diverticulum of the base of the bladder, which was probably the result of an operation for the closure of a vesicovaginal fistula.

In fifteen cases the stones in the bladder were single, in seven they were multiple; twenty was the greatest number reported in any one case. The stones were report- and Group 3, stone in the diverticulum alone, six cases. The total is ed to be large in nine cases. Stones in the diverticulum were single in 11 cases, and multiple in four; with two exceptions they were of medium size.

In three cases the stone was wedged into the diverticulum with a portion projecting into the bladder. In two of these cases stones had previously been removed from the bladder in the Mayo Clinic; small diverticula of the base of the bladder had been noted, but they did not contain stones and were not removed. Both patients returned with a stone free in the bladder and a stone filling the diverticulum, with a projection into bladder through the small orifice. Through the cystoscope roughened areas could be seen on the stones in the bladder, where they had broken off from the stone in the diverticulum. One of the stones was removed from the diverticulum suprapubically, the diverticulum being excised at the same time. In the third patient the stone was not removed from the diverticulum, as he was seventy-eight years old and in feeble health. He obtained symptomatic relief when the portion which projected into

the bladder was removed with a specimen taker through the cystoscope. The fragment removed was pure calcium carbonate. This patient later returned with a third bladder stone, which was removed by litholapaxy. Two years elapsed between each recurrence. In a review of the literature only three cases of this type of dumb-bell stone filling a diverticulum and projecting into the bladder were found. One case was reported by Davis, one by Young, and one, observed in the Mayo Clinic, was reported by Martin. The two new cases included in this report make a total of five cases.

Benign prostatic hypertrophy was noted in eleven patients, stricture was noted in five, and atonic bladder in two. Residual urine was found in amounts varying from one-half ounce to complete retention in twelve patients. Twenty-seven patients had more severe cystitis than is uniformly found in uncomplicated cases of stone in the bladder. The walls of the bladders were often thickened and infiltrated throughout, and sometimes the mucosa was necrotic. Carcinoma was present in three patients; in one the malignant growth was near the mouth of the diverticulum, and apparently in one it had originated in the diverticulum. Two patients had a duplication of both ureters; this was the only congenital anomaly noted.

The smallest diverticulum was 2 cm. and the largest 9 cm. in diameter. Twenty-one patients had single diverticula; two had two each, and five had multiple diverticula. One diverticulum was multilocular. The orifices of the diverticula were often recorded as very small; they opened into the base of the bladder in eleven; in the lateral walls in ten; in the posterior wall in two; and in the dome in two; the area was not recorded in six.

The inflammation in the diverticulum was often of greater severity than in the bladder itself.

That diverticulum is an etiologic factor in the formation of stone in the bladder is strongly suggested by the fact that of the twenty-eight patients three had passed many stones before coming to the Clinic; six had had stones removed at previous operations, one having had two operations. In the cases in which the diverticulum was not removed at the first operation in the Clinic there have been seven recurrences in four patients, five in the bladder, and two in the diverticulum. The total recurrences, therefore, were seventeen in thirteen patients. In cases in which the diverticulum was removed there were no recurrences of bladder stone. The high incidence of stone in these cases of 12.1 per cent is also suggestive of diverticula as an etiologie factor.

Two patients with stone in the diverticulum had had previous suprapubic cystostomy and the stones were not found. In one of these patients the stone was completely sealed over in the diverticulum with inflammatory tissue and was diagnosed inoperable carcinoma elsewhere: he had worn a suprapubic catheter for seven years and a large stone had formed in the bladder.

Treatment

Of the twenty-two cases with stones in the bladder, suprapubic lithitomy was performed on seven-

teen, and lotholapaxy on four; one died from a perinephritic abcess and sepsis without removal of the stone.

Eleven of the fifteen patients with stones in the diverticula underwent suprapubic operation; in one patient the stone was pushed into the bladder and litholapaxy performed, in one the stone in the bladder was removed and the patient died from carcinoma of the bladder; in one a suprapubic drainage only was done because of the extremely serious general condition of the patient complicated with gangrenous cystitis; in one operative procedures were not undertaken, the patient died from carcinoma of the larynx.

In one patient a combined bladder and diverticulum stone was removed suprapubically.

In seven cases the diverticula were excised at the time the stone was removed, and in one at a later operation. In one case the diverticulum was opened into the prostatic urethra; in twenty the diverticula were not removed. (One diverticulum was removed elsewhere later.)

In five cases recurring bladder stones were removed by litholapaxy. In the two cases of recurring stone in the bladder and stone in the diverticulum the stone was removed from the diverticulum and the diverticulum obliterated suprapubically in one. In the other case the bladder stone was removed by litholapaxy; the stone was not removed from the diverticulum on account of the patient's age.

Mortality

There were four deaths (14.2 per cent of twenty-eight). One patient died the seventy-second day after suprapubic removal of stones from the bladder and resection of a carcinoma at the mouth of the diverticulum. Death resulted from extension of the carcinoma. One patient died the seventeenth day after a suprapubic drainage for gangrenous cystitis; death was the result of renal insufficiency and sepsis. Two patients died without operation, one from carcinoma of the larnyx, and one from perinephritic abscess and sepsis. There was no mortality following the removal of diverticula or of stones from diverticula.

Conclusions

Diverticula of the bladder occur more frequently than is usually supposed and may often contain stones.

The incidence of primary and recurring stone in the bladder seems higher than when there are no diverticula.

Diverticula are often overlooked both on examination and at operation. They may be easily diagnosed by means of the cystogram.

We should not be satisfied to remove a stone from the bladder, but should if possible correct the cause of its formation and thus prevent recurrence.

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THE PHYSIOLOGY OF THE PYLORUS.

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Read before the Medical Section of W. Va. Medical Assn., Charleston, May 25, 1921.

The problem of the motility of the pyloric sphincter and the parts of the stomach and duodeum on either side is not wholly academic. Every gastroenterologist frequently faces problems which demand for their solution an adequate explanation for the activities of the gastric pars pylorica. Most of these men will agree with the statement that such an explanation is not to be found in the extensive literature of the subject, nor will one be proposed in this discussion. However, some few facts have been brought to light which may eventually form the basis for a more thorough understanding of the question and which already have cast some doubt on the theories in vogue at the present time.

Because of the present lack of uniformity in the application of anatomical nomenclature it will be necessary before going further to define a few of the terms which will be used. We will be dealing principally with the pars pylorica of the stomach. This may be defined as that part of the stomach from the incisura angylaris on the lesser curvature to and including the pyloric sphincter. It consists of two parts, the antrum and sphincter. These parts are not definitely separated by any easily defined boundary and in the living stomach the sphincter appears as a variable structure including a band of muscle anywhere from a few millimeters to a centimeter or more in width. All the rest of the pars pylorica is antrum. The pyloric canal is likewise variable and includes that portion of the cavity of the stomach which is surrounded by the sphincter muscle. It is a matter of little interest for the purposes of this paper that these variations do not appear so marked in the hardened and excised stomach in which the sphincter muscle consists of a definite ring of muscle more or less easily distinguished from the muscle of the antrum. This discussion is concerned with function and therefore must define the sphincter as it appears in the living consisting of the anatomical sphincter plus a variable amount of the adjacent muscle. In order to avoid conflict with the anatomists we should perhaps speak of the "functional sphincter, antrum, pyloric canal, etc."

This is the most muscular region of the stomach, the circular fibers being especially numerous and increasing in amount as the sphincter is approached. There is a consid-

erable accumulation of these fibers in the region of the sphincter and the sphincter itself is composed of a circular band of considerable thickness. Naturally this is the portion in which motility is the greatest. Most authors agree that the antrum undergoes regular ryhthmic contractions at least during the process of digestion. Whether or not the rhythm in this part of the stomach is the same as that in the portions nearer the esophagus, while of considerable interest, is of little importance for our problem.

The activities of the pyloric sphincter have been the subject of considerable study and the conclusion generally reached ascribe very remarkable properties to this ring of muscle, acting under the influence of a reflex mechanism. It has been regarded as the gatekeeper of the stomach watching over its emptying, seeing that only properly digested food escapes into the duodenum and that in very nicely controlled amounts. This regulatory function of the sphincter has been ascribed to various influences, among them the degree of fluidity of the gastric contents, and acidity in the stomach and duodenum.

The most satisfactory theory which has been proposed up to the present is that suggested by Cannon (1907) which regards the reaction of the gastric and duodenal contents as the controlling factors in the opening and closing of the pyloric sphincter. According to Cannon the sphincter remains closed so as to prevent the exit of food from the stomach until the reaction of the gastric contents in the pyloric portion reaches a certain degree of acidity. The sphincter then opens to permit a small amount of chyme to escape but closes immediately when the duodenal contents becomes acid and remains closed till a neutral or alkaline reaction again appears in the duodenum. Many facts of everyday experience are difficult to explain on the basis of this theory, for instance the rapid exit of water or alkaline solutions from the stomach when its contents were either neutral or alkaline. Nor will it or the theory of fluidity explain the emptying of the stomach in the condition of achylia gastricia when neither acid nor pepsin is present in the stomach and gastric digestion must be at a minimum. In spite of these and other difficulties the theory has been accepted, at least tentatively, by most physiologists and clinicians and is still the only constructive hypothesis available.

Recent work has increased the difficulties in the way of accepting as acid control of the pylorus, at least in its entirety, and the need for a theory more in keeping with the observed facts is becoming imperative. Cole (1913) (5) from a study of serial radiographs of the human stomach reached the conclusion that the degree of contraction of the pyloric sphincter is determined by the tonus and motility of the stomach and that gastric contents are passed through the sphincter at each gastric systole or peristaltic contraction. Also that the sphincter closes as the final act of a cycle of gastric peristalsis. Ivy, 1918 (6) has made the observation that water issues from the dog's stomach in such a manner as to indicate a dependence on the peris-

taltic waves in the stomach. More convincing work along the same line was done by Luckhardt, Phillips, and Carlson 1919 (7) using both graphic and fluoroscopic methods on man and dogs. They observed that the pylorus opens for the ejection of chyme with the arrival at the sphincter of powerful advancing rings of contraction aided possibly by a general increase in the tonus of the musculature of the stomach as a whole. In dogs the gastric content was observed to issue from a duodenostomy either during a marked rise in the gastric activity, or more commonly just at or after the peristaltic wave passing over the stomach had effected its greatest increase in intragastric pressure. They further demonstrated that a more definite relationship exists between the muscular activity of the stomach and the opening of the pyloric sphincter than between the opening of the sphincter and the reaction of the gastric contents.

More recently McClure, Reynolds, and Schwartz, 1920 (8) from fluoroscopic studies, found that the human pyloric sphincter opens regularly at the approach of each antral peristaltic wave, allows chyme to pass through into the duodenum during an appreciable length of time, and closes when the antral peristaltic wave has spent itself. They found no change in this regular sequence of events when the reaction of the gastric or duodenal contents was altered in either direction within physiological limits. Their work appears to justify their conclusion that acid is not the controlling factor in opening and closing the pyloric sphincter.

A further investigation of the questions raisede by Cole and the work of Luckhardt, Phillips and Carlson was undertaken by Wheelon and Thomas in 1919 and 1920, (9, 10). Graphic and fluoroscopic methods were used as well as direct observation of the exposed stomach of a dog immersed in warm saline.

The graphic observations were made by means of elastic balloons. For observation of the motility of the pyloric sphincter small hard rubber cones were tied in each end of a short piece of finger cot to assist in holding the rubber under the sphincter muscle. The apparatus was further secured in place with sutures. When the pyloric antrum was also to be studied a second balloon was attached to the gastric end of the pyloric balloon, and in the same way a third balloon was attached to the duodenal end when the observations were intended to include this structure. With this apparatus it was possible to record by means of suitable apparatus for registering the changes in the pressure within the ballons, movements of the sphincter alone, movements of the sphincter and antrum simultaneously, or movements of the sphincter, antrum, and duodenum. Dogs were used for experimental animals and records were made under a variety of conditions including light ether anesthesia, morphin analgesia, ether and morphin together and no anesthetic. The unanesthetised animals had been operated aseptically under ether and allowed to recover.

The results obtained when the sphincter alone was studied (10) showed that the pyloric sphincter,

at least under the conditions of the experiment, executed constantly rhythmic contractions which were surprisingly regular in their sequence. These contracts occupied less time than the intervening quiescent period so the usual conditions of the sphincter was shown to be that of relative relaxation rather than contraction. To quote from the published communication (10), "The sphincter demonstrates two types of motility; (a) active rhythmic contractions, and (b) tone waves. The characteristics of these two types of action is as follows:

"Rhythmic contractions. The rhythmic movements of the sphincter are characterized by contractions and relaxations each followed by a quiescent period or pause. These contractions occur at the rate of from three to five per minute; that is, each cycle is completed in from twelve to thirty seconds. The phase of contraction is four to five seconds, the phase of relaxation is three to seven seconds. The quiescent phase plus the period of inhibition prior to contraction occupy the remainder of the cycle."

The significance of these rhythmic contractions was not fully understood until simultaneous records were obtained of the motility of the sphincter and the adjacent portions of the stomach muscle (9). When simultaneous records were made of the contractions in the antrum and in the sphincter the rhythm shown by these two structures were seen to be identical. A careful analysis of the records showed that each peristaltic wave in the antrum was followed by a contraction of the pyloric sphincter. The time which elapsed between the contraction in the antrum and that in the sphincter depended upon the distance of the antral balloon from the pyloric balloon. The picture was simply that of progressive peristalsis such as might be obtained from any segment of the gastrointestinal tract. Even the preceding wave of inhibition could be observed though not marked.

There was nothing to indicate a holding contraction of the sphincter such as might be expected to prevent the exit of material carried along by the approaching wave of gastric peristalsis. The time of the sphincteric contraction was such that if it served any purpose at all it was to prevent the return of the material expelled by the gastric contraction rather than to oppose its exit from the stomach. Thus it was shown that the rhythmic activity of the pyloric sphincter is dependent upon, and in fact, a part of gastric peristalsis. That the contractions of the sphincter were actually dependent upon the peristaltic waves in the stomach was shown by applying electrical stimuli to the stomach when all rhythmic activity had ceased. The same series of events took place as were recorded during spontaneous peristalsis. There was a contraction wave set up at the point of stimulation which progressed over the antrum and eventually involved the sphincter. The time between the application of the stimulus and the appearance of the contraction in the sphincter was roughly proportional to the distance of the point stimulated from the pylorus.

Experimental methods involving the introduction of a foreign body

into the stomach, and especially recent surgical interference in the experimental animal are open to critsince both factors may modify the results obtained. However, it is a well known fact that reflexes are readily fatigued and cease to act if the stimulus is continually applied and the effect of a foreign body, if any, would be to set up reflexes of one sort or another. These could reasonably be expected to cease their effect through fatigue in a short time. No difference in the type of results obtained could be observed after the apparatus had been in place 24 hours or longer. Further, experiments were performed with recording apparatus attached entirely to the outside of the stomach. If the placing of this apparatus set up disturbing reflexes they might be expected to differ from those which would arise from a foreign body within. The identity of results obtained by the two methods indicates that neither disturbs the motility of the stomach to any serious extent.

The possible effect of operative procedures is less easily eliminated. It is generally believed that laparotomy inhibits for a time the movements of the alimentary canal. This is probably true for man, but the dog's stomach resumes its motility almost as soon as the incision is closed even when the stomach has been operated upon and otherwise traumatized. A further check upon the accuracy of the methods used consisted of serial radiographs of normal dogs. These are more easily interpreted than radiographs of the human stomach because of the fact that the stomach of the dog does more nearly in a single plane than that of the human, making it much easier to ray the sphincter, and also that the surrounding tissues are less dense making shorter exposures and clearer pictures possible. The striking agreement of the findings described with those of other investigators who used widely different procedures may be cited as a further check upon the reliability of the methods.

In order to assume an acid control of the pylorus or a control based on fluidity of the gastric contents it is necessary to suppose that the movements of the sphincter muscle are, at least, part of the time independent of gastric peristalsis. This means that the sphincter must be supposed to be a separate functional entity different from the rest of the gastric muscle having a special nerve supply and controlled by a special set of reflexes. Since peristalsis in the antrum is agreed to progress rhythmically during digestion, any assumption which attributes to the sphincter the power to control the emptying of the stomach must allow for many peristaltic waves in the antrum which are without effect on the closed sphincter.

The experimental work of several observers, described above, has demonstrated by many different methods that the sphincter is definitely a fundational part of the muscle of the antrum; that it exudates a contraction and a relaxation with each peristaltic wave just as any other part of the gastric muscle; that chyme is forced through the sphincter with each antral peristaltic wave and not at irregular intervals as would be the case if the sphincter were controlled by some

special influence such as gastric and duodenal acidity. In one series of experiments performed on man it has been shown that changes in gastric and duodenal acidity do not alter the regular sequence of events which has been observed to take place in the pars pyloric.

These observations tend to lower the dignity of the gatekeeper of the stomach. Apparently too much emphasis has been placed on the sphincter muscle as the main factor in the control of the emptying of the stomach. There is no good reason in the light of the evidence quoted to suppose that the sphincter does more than to prevent the spontaneous passage of material from the quiescent stomach, a function for which there is use only occasionally perhaps, and to prevent regurgitation of recently expelled gastric contents from the duodenum. There is no evidence that the normal sphincter ever prevents a vigorous peristaltic wave in the antrum from forcing whatever material it may be carrying forward into the duodenum. Emphasis should be placed on the word "normal" for no one will deny that a pathologically contracted or hypertrophic sphincter may not relax sufficiently to allow of normal emptying of the stomach. Such a pathological contraction may indeed occur at any point on the digestive tract and can scarcely be used as an argument in discussing normal function.

To quote again from Wheelon and Thomas (9) : "Our results along with those of Cole, and Luckhardt, Phillips and Carlson (The paper by McClure Reynolds, and Schwartz had not appeared when this was written) demonstrate that the activities of the pyloric sphincter, at least in great part, are dependent on the activities of the antrum. That is the impulse to contract in the antrum during digestive processes is propagated to the sphincter, thereby causing it to contract at a time of relaxation of the antrum and to relax because of the arrival of a wave of relaxation over the antrum. Such conditions indirectly lead to the conclusion that acid if it acts to regulate the "pylorus" must also act in a similar way upon the antrum and stomach as a whole, for, as shown above, motility of the antrum determines motility of the sphincter."

It is evident that in reconstructing the theories regarding the manner in which the pars pylorica executes its functions less attention must be given to the sphincter muscle alone and more to the motility of the stomach as a whole, especially that of the pyloric antrum. In seeking for the factors which govern the emptying of the stomach those conditions which affect gastric motility must be considered the determining factors. It is neither possible nor advisable in the attempt to bring our ideas of the pyloric function into accord with recently observed facts to discard the experimental results on which present theories are based. However, their interpretation may be modified the observed facts must remain facts and must be taken into account in the construction of any theory of pyloric function.

It would be distinctly premature for instance to assume at once that acid has nothing to do with the control of the exit of food from the stomach. Even through the work

of McClure, Reynolds and Schwartz indicates that changes in reaction in the stomach and duodenum does not alter the regular sequence of events in the antrum and sphincter, their results must be considered in conjunction with the experimental work of Serdjukov (11) and of Cannon (4) which indicates just the contrary. An evaluation of these contradictory results must be based on something more substantial than the chronological order in which they have appeared. If, however, we grant the influence of acid it will in all probability be found to exert its control over the motor function of the stomach as a whole rather than the pyloric sphincter as has been supposed. The same may be said in regard to the influence of the fluidity of the gastric contents.

Another factor which has been thought to influence the closure of the pylorus is the degree of filling of the small intestines or the duodenum. This idea was proposed by Mering, 1893 (12) and supported by Schicker (13) 1911. This factor has not received the attention from physiologists which it probably deserves, due no doubt to the influence of Cannon's theories, which had apparently disposed of the problem. In our experiments with dogs a distinct delay was noted in the emptying of the stomach if a second barium meal was given. That is the first meal left the stomach in a fraction of the itme required for the exit of a second meal immediately following.

Much work will have to be done before a definite statement can be made of all of the factors which assist in controlling the exit of food from the stomach. This much seems certain however, that the pyloric sphincter exercises a much less importan tfunction in this connection than was formerly supposed. Of the many influences which assist in controlling the motility of the stomach as a whole, and therefore in the light of present evidence, the sojourn of food in the stomach, acidity of the gastric and duodenal contents must still be regarded as one supported by the most satisfactory experimental evidence. Since this factor alone will not account for all of the facts we may add to it, at least tentatively, the stage of gastric digestion as indicated by the fluidity of the material in the stomach and the amount of material already present in the duodenum and the remainder of the small intestine.

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THE IDEAL OBSTETRICIAN*

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The organization of this group brings a promise of great progress in obstetrics in the southland, even in view of the fact that there are already two national societies, besides the section of the American Medical Association, interested in this subject.

However, the American Gynecological and the American Association of Obstetricians and Gynecologists are both composed of teachers; and the American Medical Association, reaching from coast to coast covers so much territory that our men can but seldom attend is sessions on account of the distances. The personnel of this group consists of a few specialists and a much larger number of general practitioners, a part of whose work in obstetrics, who are doing the major portion of maternity care throughout the country.

Obstetrics has always been a sort of medical Cinderella. We need but look over the records of the last eighty years to realize this truth. The late John Burroughs, in a whole page article in the New York Times but a short period before his death, made a statement that the money spent on doctors and nurses at the birth of a child is wasted. He based his claim on the argument that the entire sum paid out for the confinement of his mother was a $3 fee to the medical man. All the additional care the poor woman received was that of the hired girl who brought her food and made her bed.

The great naturalist evidently failed to appreciate his inheritance of virile stock, and the care of a mother such as his must have been, which enabled him to survive the many dangers which beset birth and infancy. No one can estimate the loss of life to the nation of those born simultaneously and not protected by his fortunate immunity. For in the day of the babyhood of Mr. Burroughs prenatal care was unknown, and the scourge of childbed fever was claiming its victims in thousands of cases where it was laid to the influence of "miasma," a germ floating in the air, which settled on the patient and carried her off to her final reward.

It is a sad commentary on the intelligence of the so-called cultured classes that, to so large a degree, they have been in times past heterodox, and suspicious of the achievements of physicians, especially in the line of obstetrics. A story is told of Dr. Willoughby, a famous English surgeon, whose daughter was a mid-wife, that he crept into the lying-in room of a noble lady on his hands and knees and, whipping the forceps out from his pocket, he hurriedly applied them, extracted the baby for her and made his escape unknown to the great personage, who never realized that a man midwife had dared penetrate the privacy of her bedchamber.

A Bavarian physician, Dr. Wirth,

donned the dress of a woman and in this disguise entered, in consultation, the room of a woman in labor, only to be discovered and burned at the stake as his reward.

As late as the end of the last century, 1890, no obstetrician was eligible in England to the Royal College of Surgeons. Our own section is the last to be organized in the Southern Medical Association, although obstetrics is of such vital importance that it should stand first of the major triumvirate—obstetrics, internal medicine and surgery. Our own child, pediatrics, has here a three days' program, while we try to cover obstetrics and gynecology in one day. But we are coming into our own in the southern as well as in the general field of medical and surgical art.* We shall hail the day when the profession itself realizes that there is a specialty of obstetrics, and that a man has even less right to deliver a child from its mother's womb without training than he has to remove a fibroid or a cystic ovary without training.

That obstetrics has been so slow in gaining the dignity and importance which it should be accorded is less to be wondered at since birth is a process of nature. Children are born with or without artificial assistance, while surgery is wholly an evolution of science and art.

Indeed, the term midwifery bears a tradition of reproach, recognizing as it does the survival of the primitive practice which left the management of labor in the hands of ignorant, if well-intentioned, women.

That our states should fail to so value the lives of its possible future citizens as not to enact protective laws relative to maternal and infant welfare, and thus change present conditions throughout the entire country, seems preposterous. Since coming to this meeting, your chairman has been told by the president of the board of health of one of the Gulf States that 60 per cent of the women in his state are attended by negro midwives, of whom he has listed the names of three thousand. The use of the midwife is generally universal among the foreign born of our large cities, a custom brought with them from their native lands.

In 1916, in the United States 16,000 deaths of women in childbirth alone were reported. This number was increased to 23,000 in 1918. The two most destructive foes to our mothers are sepsis and eclampsia. The death rate from these causes has increased from 1901 to 1919 instead of diminishing, in spite of all the improvement in hospital technic, because the great majority of women are still delivered in their homes. No account is here taken of the thousands who are made permanent invalids through their service to humanity in the function of maternity. In a recent work on gynecology the statement is made that the great bulk of gynecological surgery is the result of poor obstetrics. How familiar to all of us is the story, "I have never known a well day since the birth of my first child." And yet much of this morbidity and mortality is preventable.

Snow's statistics demonstrate that that the dangers to the child are even more perilous than those of

the mother, showing that during the first four weeks of extra-uterine life 250,000 infants perish. In an article on "Obstetric Death" our friend, Dr. Barton Cooke Hirst, in a recent number of the Journal of the American Medical Association, claims that 25 per cent of all life is lost before birth, a wastage almost incalculable. At such a sacrifice motherhood is indeed a hazardous occupation.

Can this section be instrumental in helping to reduce the melancholy record which these statistics present?

Your chairman believes that never was a greater opportunity offered for service than is before us today if we will but visualize the facts with which we are more or less familiar, and will demand certain definite qualifications for ourselves which will meet the necessity for better technic in labor, an evolution which will develop the ideal obstetrician.

First of all, the obstetrician must be a trained physician. Twenty-five years ago the teaching of obstetrics in our prominent medical schools was so bad that any one of them, as was stated in a recent symposium on medical education, would have been promptly closed by the government of any country in Europe under similar conditions.

And the obstetrician, as emphasized by Dr. Joseph B. deLee in an address before the American Gynecological Society, is the one man in medicine who must be universally qualified. He must have a ground work of training covering every department from biology, anatomy, embryology and physiology, on through the special surgery connected with the mechanism of labor and its management and the complications that may ensue in the delivery of the child.

Prenatal care, only a few years ago, was not even suggested in our obstetrical curriculum. Ordinarily the pregnant patient was not seen by her attendant until the onset of labor. Often, too, in the most intelligent families confinement was an emergency. The date of expected delivery was calculated from the quickening of the child, verified by the time of the last menstruation; no measurements were made nor any physical examinations, except occasionally an unfortunate meddlesome vaginal exploration, which frequently caused a serious infection.

The lack of proper training in our medical colleges is in evidence in the results obtained by many men doing obstetrics.

It can not be questioned that great advance has been made in the teaching of obstetrics, although Dr. Hirst believes we still average far below the medical schools of Europe, both in clinical material and in roster. Prenatal care, including accurate measurements of both mother and child, is now a part of the routine drill in most of our colleges.

We have among our teachers of obstetrics men of the most outstanding ability, and yet, even today, the boards in authority in many of our universities do not give to this subject the distinction which its importance deserves. The distinguished professor of obstetrics in one of the most prominent of the

eastern schools has for twenty years had his department of the medical college in the basement of the building because of politics in the faculty and in the board.

As a consequence of this unjust atmosphere the student himself belittles the value of the subject and begins his under-graduate career with a prejudiced view.

The ordinary medical student is always looking for the spectacular. He wants to see a laparatomy or a gastro-enterostomy, a gall-bladder operation or a nephrectomy, a major amputation of the breast, or the confirmation of a diagnosis in psychiatry through the trephining of the skull. The routine management of normal labor affords him no thrill.

But alas, the management of labor is usually the very first surgical demand to be met by the new graduate. None of the major surgery needs be considered by the medical neophite. He must be familiar with at least the essentials of good obstetrics before he attempts his first case of labor. Inadequate knowledge is gained by the aid of experience, but at the risk of the patient. The diagnosis of the occiput posterior or anterior; the breech or the vertex; the differentiation of single or multiple pregnancy; the height of the fundus; the relation of the precenting part to the brim of the pelvis; all these problems may be puzzling to the experienced operator on occasion, but to the beginner, without thorough drill under competent instructors, they mean nothing. Fortunately many times nature comes to his relief if he can only be brave enough to restrain his impatience and maintain firmness with the family and friends who insist that something out to be done. If he himself knows that the only safe and sane thing to do is to wait, his confidence inspires hopefulness and sets their minds at rest. Unfortunately, on the other hand, he may trust to nature so long in another case that abnormal conditions arise which he is incompetent to recognize or cope with. Frequently the result is disaster.

That physician is the rare exception who, after entering his professional work, takes the time to study and familiarize himself with the details which would have been easily acquired in a good hospital clinic, and which afford the obstetric training he should be given before a diploma is granted. If in his student days he acquires a clear knowledge of the mechanism of normal labor, and studies the individual case in the light of his teaching, his technic is assured, every step is taken with caution but with deliberate confidence in his ability to secure the best possible result.

That larger opportunity may be open to the student for this training, there is a great need of more maternity clinics—even if not actually connected with medical colleges—where material may be assembled for his comprehensive instruction. Such clinics are being widely established in Great Britain.

When all theoretical and clinical training of the undergraduate has been completed he is fitted only with the foundation for his super structure in obstetrics. He must realize that no matter how well grounded has been his fundamental

drill he must go at once into the broader field of post-graduate education.

Many men leave their college after graduating with honor and distinction and on entering practice settle down satisfied with their technical knowledge. They do not read the journals nor attend medical societies. They naturally fall woefully behind their competitors, who are studying their cases, keeping case records, and from these reading papers in the societies. These men fail to live up to their light. It is the part of the duty of this section to bring them to a realization of the wonderful advantage of co-operation and the mutual help which the society brings to all of us.

The state and county and district societies are alike invaluable. Sections on special subjects, like our obstetric group, constitute the forum where we all meet on a common footing, and where our problems through discussion are solved.

The Ideal Obstetrician Must be Conservative

As St. Paul told the Corinthians, "Believing all things, hoping all things, enduring all things," we must be willing to sit and wait a while when all goes along in normal mechanism, even though the rapid-fire, up-to-the-minute radical who would disdain such waste of time, calls us midwives who are willing to give nature a chance.

Prof. Francis Marion Johnson, to whom your chairman owes much in the way of obstetric principles, used to tell his classes not to be led into temptation to ge thold of a foot in breech extraction, since all haste in delivery was but a delusion and might end in fatality.

The ideal obstetrician must set his face against all expedients to shorten labor unless scientifically indicated.

In the novel "Tristram Shandy," Laurence Sterne has the hero relate the story of the prowess of Dr. Slop in the use of the forceps, telling his auditors:

> "My Uncle Toby, being but recently back from the fighting in Flanders, was present when Dr. Slop adjusted the machine, and the child was hurled into the world with mighty speed, like a ball shot from the mouth of a cannon."

The forceps is the most useful surgical instrument ever invented. But since the advent of the universal administration of anesthetics in labor, it has become all too easy to put the patient to sleep, and before engagement of the head to apply high forceps to do an extraction. Many instances of material lacerations and fetal cerebral lesions are directly traceable to hasty and indiscreet application of the forceps, even though a less degree of celerity is exercised than that which the picturesque language of my Uncle Toby ascribes to Dr. Slop. These subjects throughout life are an ever present evidence against the medical man who thus violated the first law of the forceps.

Not only are forceps to be condemned when improperly used, but

under this category shuold also be considered the indiscriminate use of pituitrin, version and Caesarean section. The reservation is always made that these expedients may be employed by those qualified by special training, and who are experts in the special method suggested. Otherwise no physician should undertake any of these proceedings without consultation.

That Caesarean section has come to be all too commonplace there can be no question. The story is told of a member of the faculty of a certain Western university who brought his wife to Kansas City to have a section done merely to spare her any of the pain of childbirth.

The ideal obstetrician does not call at the beginning of labor for his friend, the consulting surgeon, who may be standing by, knife in hand, that the baby, in the language of Macbeth, may be "From its mother's womb untimely ripped" before she has been given the test of labor.

The present Professor of Obstetrics at Harvard College, Dr. Franklin Newell, in a paper published in 1919, said that he had discovered by a survey of towns within a radius of forty miles of Boston that there were in a period of a few years in that region a series of one hundred Caesarean sections done by amateur surgeons, in which the mortality was 100 per cent. It goes without saying that a 100 per cent mortality is an inexcusable stigma on the profession. Such a record could only result in case of Caesaraen section done without indication and on a patient septic before operation. It may be taken for granted that vaginal examinations had been made and various attempted manipulations, including forceps and versions, before the section.

Caesarean section has a definite place in obstetrics as has every other means of safeguarding the two patients. We must bear in mind Rudolph Holmes' warning that obstetrics is in danger of becoming a lost art and endeavor to give to a woman in her lying-in the test of labor before resorting to any surgical expedient. No Caesarean should be done except after consultation, and in the case of an emergency where the life of the child or the mother, or both, is involved; or where some danger is indicated by marked discrepancy of the Baudelocque, the McDonald and other measurements of the mother and child. These measurements, which have become routine and accurate, will be presented for us this afternoon by an expert in their use, our friend, Dr. Chas. B. Reed, whose voice has been "as one crying in the wilderness" for this right of the unborn child.

These measurements, as well as the position of the child and of the fetal heart, will make clear the deviations from the normal which indicate the rare instances in which the section is suggested.

Many surgeons, having in mind the dangers of infection, have refused to perform Caesarean section after more than one vaginal examination has been made in the labor.

Conditions in the case under consideration must determine the question of the mode of delivery.

The ideal obstetrician must be progressive without being radical.

One of the greatest drawbacks to the progress of scientific medicine in general, and obstetrics in particular, is the tendency of those in the limelight in the profession to decry the reformer and the man with a vision, and to condemn all innovations as being selfish exploitation. The attack is often continued after time has demonstrated the fallacy of an ultraconservative attitude.

Recall the bitter fight made by Meigs and Hodge, and later by Fordyce Barker, on Oliver Wendel Holmes, then Professor Anatomy in Harvard College, for his outspoken stand on the contagiousness of child bed fever to which his essay, "Puerperal Fever, the Private Pestilence" gave such widespread publicity.

This essay was written in 1843. In an acknowledgment to the "Autocrat of the Breakfast Table" for the famous essay the author of this paper once expressed his obligation and appreciation. Dr. Holmes wrote in reply:

"I shall rather forego all pretension to literary attainments than to have failed to write the essay on 'The Private Pestilence,' which I have good reason to believe has saved many valuable lives."

The same two men, Meigs and Hodge, in 1847, fought Sir James Y. Simpson in his advocacy of the use of ether anesthesia, which also had its prolonged opposition. They said, "Pain in labor is a God-given experience," "To interfere with labor pains is flying in the face of Providence," and more along the same line of familiar argument. This professional warfare is comparable to the denunciation today against scopolamin analgesia by those who have had no experience with it in a routine series of observations, but who enter a general denial, because they are not willing to give it a fair and honest trial. And yet some of us believe that scopolamin is the greatest boon in obstetrics since the advent of inhalation anesthesia and asepsis. While to bring into discussion controversial points is not in good taste where there is no right of subsequent reply, we must say with Voltaire: "I give you my opinion, not as being the best, but as being mine."

The ideal obstetrician must respect the value of his own services.

No professional man, from tradition and from lack of time, is so proverbially unbusinesslike as the doctor and the obstetrician is the most conspicuous offender. He is not a tradesman, and he should be free from any spirit of commercialism. When a prospective patient consults him his first consideration is not the possible fee. He does not preface his examination, as it is said is done by the commercial accoucheur, by saying, "My minimum fee is $250. If you can not pay that sum, you are wasting your time and mine."

But once the question of the fee is presented, he should feel no hesitancy to place a just monetary value on the service he is to render. The most difficult point to decide is what is just to one's self and at the same time meets the financial circumstances of the family. But "shopping" on the part of prospective parents, who demand the best in every line, no matter what the cost, and are abundantly able to pay for it, should be discouraged.

The profession itself must be made to realize that as a rule obstetrical fees are pitifully inadequate and not at all commensurate with those in other branches of medicine. As a result we find many of our promising obstetricians drifting into gynecology because of the more attractive compensation and the lessened responsibility. Many a dentist receives more for the extraction of a tooth than is paid to the attendant in the delivery of a child.

Doubtless competition, with a desire to prevent the case from being secured by some other physician and thus perhaps all the family practice be lost, has influenced the general practitioner to adopt a scale of fees more nearly on an equality with the few dollars paid as wages to the midwife than to the honorarium which the surgeon receives.

The unfortunate propaganda of the Johns Hopkins professors, which has been exploited through the popular magazines, has done a great deal of harm, because it is grossly misleading and gives a wrong impression to the public. The people who can pay a thousand dollars, or any other large sum, in fees for surgical operations are not the average families who constitute our clientele; they are the rich who should not come under the same classification with our great body of self-respecting middle class people, so-called, upon whom rests the burden of parentage, and who will never be asked a fee which on its face would be preposterous.

Children are born in the early years of married life, before the surgical age of gall-bladder, enlarged prostate and other major league engagements. However, when the subject comes up for discussion in the newspapers and magazines, there is no discrimination and every medical man is likely to be criticised if any fee is charged more than the three dollars which Mr. Burroughs had to pay when John was born. The fee of the obstetrician is from nothing up, but it must be commensurate with that received from other surgical cases in the community.

No special surgery is so ill-paid as obstetrics. In no other are two lives to be considered. In no other must the time limit be taken into account in figures of hours, even days, rather than of minutes. Education alone can change the attitude of the public in its estimate of the comparative worth of obstetrical and other surgical fees. But not until the obstetrician himself shows a proper respect for the proper value of his own services will that service receive the compensation which it deserves.

Personal Qualifications

Not only must the ideal obstetrician have the professional attainments which make him competent to assume the responsibility for safeguarding two lives in time of peril, but there are personal characteristics as well which are important to insure his success.

The ideal obstetrician must be a gentleman. He may not be polished with the culture that polite society stamps as gentle, but he must be imbued with the spirit of gentleness. He recognizes the vag-

aries and whims and even unreasonable demands of the woman in pregnancy. He appreciates that her condition is one of disturbed metabolism, and he is therefore patient and alert in her behalf. He realizes that child-bearing is to be regarded as a not purely physiological process, but that the prospective mother must have protection through the ordeal which she faces in bringing a new being into the world, and that the life of the unborn child is sacred. A dignified bearing with cordial sympathy will appeal to the instinctive demand of the young mother to assure her that he is not only her protector, but a real friend in her hour of need.

The ideal obstetrician must be an humanitarian. He is filled with an inborn desire for service. He considers his patient in the one aspect —a woman who is to be spared the perils which the coming mother faces in her confinement by the protection which may be summed up in the phrase, intelligent, conscientious attention and rigid asepsis. He resolves that in carrying her through her pregnancy he will, clearing the rocks of Scylla and Charybdis, land her on the happy shores of motherhood, a healthy baby in her arms, spared to assume the responsibility of her new found happiness.

The instinct for service must not be limited by the ideal obstetrician to his private patients alone, but it is his part as well to help arouse the conscience of the world to the awful significance of the morbidity and mortality of childbirth. It is the professional duty of every obstetrician to help secure for the poor in every community opportunity for prenatal care as well as for those financially able to command that attention. No prospective mother should go to labor without this informative attention. In the 354 cases, from the various prenatal clinics, confined in Kansas City last year, there was no maternal mortality, and the infant mortality was 50 per cent of the general infant death rate in Kansas City.

Nothing more practical nor more vital could be undertaken by our new section than to initiate a movement to so arouse the public to the claims of motherhood, that there shall be established in every county in the southland a hospital to serve as a prenatal center and a maternity home, so that it shall be possible for women in the country districts to have the same facilities for care that are available in the cities.

Not only the death of the unborn should claim the concern of the ideal obstetrician, but also the lack of child-bearing and sterility in the families best fitted by blood and inheritance, and by financial ability to care for children, should demand his notice.

Some one has said that child-bearing is the world's greatest industry, but how many quit with the first product! Forty years ago the average family in New England was six and a fraction children; today it is barely two. One child sterility is a calamity of such proportions that in France, before the war, the rate of birth so fell that the death rate was in excess, and the government paid a bonus to families of over three children. Unless the conditions indicated by these figures could be changed, the result

would be the downfall of the nation.

We commend the adoption of children into families where actual sterility exists, but one of the striking developments of our modern social life is the growing fashion of healthy and prosperous young married couples to thus gratify their instinctive craving for children rather than to extend their own life by progeny which they know to be of clean blood and good breeding; to accept, in place of their own possible offspring, those from foundling societies and maternity hospitals, with an unknown inheritance, perhaps of crime and disease.

With all appreciation of the philanthropy which the adoption of children involves, and with due regard for the helpless infant thrown on the charity of the world, who may thus receive the blessing of a name and a home, a grave question presents itself as to the character of coming generations if those physically and mentally well endowed, trifling their conscience and sacrificing their birthright, renounce the burden of child-bearing and relegate parentage to the uncertain and irresponsible members of society.

The essentials of the ideal obstetrician which have been suggested answer, in part, it is hoped, the reason for the existence of this section. These essentials, as a whole, may be embodied in the inspiration of the idealist, expressed in one word, and that word is service, service in the salvage of human life.

Nature made provision for the continuation of human life in that wonderful evolution, the development of the embryo into the perfect child. That this provision of nature may be protected is the service of the ideal obstetrician. This service is rendered by education; education of the probationer and of the profession; education of the patient and of the public; education of the patrician and of the proletariat. This education begins with ourselves.

In the words of John Milton, "Accuse not nature. She hath done her part. Do thou but thine."

THE "TEETHING" BABY

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There is a very ancient, widely prevalent, and time-honored notion held by people in general concerning the ill effects on a baby's health which may result from the eruption or "cutting" of the temporary or deciduous teeth, otherwise known as the "Milk teeth." This process is commonly designated by the term "teething."

That this idea has and does prevail is abundantly evidenced by the not inconsiderable amount of literature that has accumulated on the subject, as well as the many notions both fanciful and foolish which lie so firmly imbedded in the public mind.

Indeed, it is not uncommon to find this perfectly normal, natural, physiologic process surrounded by more or less superstition and dread in the minds of people of ordinary and sometimes extraordinary intelligence. Why this condition should prevail is a psychologic enigma not

easy of solution, but that it does prevail, and quite generally, is abundantly evident to those who in their daily pursuits come in contact with the mothers of large numbers of sick or ailing children.

The soft fine hair with which a baby is born is not permanent, it soon falls out to be replaced by other hair, but apparently no one has ever though to attribute any of the ills of early life to the appearance of this new hair. This might have been done however, with quite as much reason in the one case as in the other. It is quite as natural for a baby's teeth to grow as for his hair and finger nails and is, under normal conditions, attended by no more difficulty.

In the study of embryology it is found that as early as the forty-fifth day of intra-uterine life the temporary or deciduous teeth have begun to form in their sockets in the jaw bones and at birth the crowns of these teeth, twenty in number, lie just beneath the margins of the gums; while deep down in the jaws the formation of the permanent teeth, which will in time replace the temporary ones, has already begun to take place.

As time passes and the baby thrives and grows, the teeth grow also, pushing up through the gums, while the gums, by the process of absorption are thinned correspondingly, until about the sixth or seventh month of life the first tooth, usually one of the lower middle incisors will show through the gum, which by this time has thinned down to the thinness of tissue paper. The gum soon separates, retracting around the crown of the tooth and the tooth is then said to have bee n"cut." There is no swelling, inflammation or even redness, simply a retraction of the gum once it has become thin enough. The same process takes place with each of the twenty temporary teeth, provided the baby's mouth is in a healthy condition.

If, however, the mucous membrane is diseased, from the introduction of irritants, diet or infectious material into the mouth, or the gums have been irritated or inflamed by meddlesome rubbings with the finger or some other object, by the mother, nurse or some other well meaning but misguided individual, the process may not be so simple.

The red and swollen gums, the hot, dry, reddened and congested condition of the mucous membrane sometimes seen in the mouth of babies who are said to be "teething" is not caused by the eruption of the teeth, but can be demonstrated to be due to some other cause. It may be a part of the external manifestation of some acute infectious disease, or the trouble may be localized in the mouth. Often these simple inflammations are due to the presence of some mild infection which has gained entrance to the mouth from soiled hands, or toys, dirty nipples or pacifiers, or the delicate tissues have been injured by too strong or irritating mouth washes, or too much force being used in their application. The food may have been given too hot, and thus damaged the mucous membrane so that the ever-present micro-organisms were enabled to gain entrance and start an inflammation.

Whatever the origin of the diffi-

culty in the beginning rest assured it was not the teeth. In order to have an inflammation of the mouth, gums, or any other part of the body it is necessary to have the presence of bacteria. These bacteria do not enter the mouth with or because of the erupting teeth.

It is a perfectly natural thing for a normal baby to put objects into its mouth, just as most little animals will try their teeth on anything that comes handy, to see if it can be used for food. This putting of things into the mouth will do the child no harm, and there is no good reason why it should be deprived of this pleasure, provided we take care to see that the objects are scrupulously clean and that there are no rough surfaces or sharp corners with which he can injure the delicate mucous membrane and thus open the way for infection. The objects given to a baby as sources of amusement should not include the ubiquitous "pacifier." They are pernicious objects, becoming soiled with accumulated secretions from the baby's mouth in which bacteria grow readily, or falling on the floor which is usually not over clean, they are given a perfunctory wiping off and go back into the baby's mouth. The pacifier is invariably a sign of poor care and bad nursing.

The practice of using mouth washes in the healthy mouths of young babies has come about as a result of our exaggerated ideas of the efficiency of antiseptics. They are however, quite unnecessary and may even do harm if used too strong or with too much force, by damaging the delicate mucosa and thus opening the way for the entrance of bacteria into the tissues. Of course if the child already has a sore mouth the gentle application of mild washes is distinctly applicable until the trouble is relieved.

The mucous membrane of a baby's mouth is literally loaded with bacteria a few hours after birth and will remain so throughout life, and these bacteria cannot be entirely removed or killed off by any or all your mouth washes.

There is but little food left in the mouth after nursing and if the mouth is healthy and the food suitable this will do no harm. If, however, you want to do something, give the child a spoonful or two of cool boiled water. This will make a very satisfactory toilette of the mouth and will at least do no harm.

The class of diseases most commonly attributed to "teething" are those affecting the gastro-intestinal tract. This is probably due to the fact that disturbances of this nature are the most common of all the acute diseases affecting young children.

The vomiting, diarrhea, fever, nervous symptoms, and sometimes convulsions which accompany these attacks, are due to the toxins or poisons which are being absorbed into the blood from the deleterious matter in the digestive tract, and have no connection whatever with the eruption of the teeth.

These digestive troubles are more prevalent in the heated season, and among children living under bad hygienic surroundings, and can almost invariably be traced to some error in feeding. Either the food is unsuitable or unwholesome, or

given irregularly, the bottles and nipples are not properly cleansed and cared for or the baby's vitality and resistance has been lowered by the enervating effects of the extreme temperature or excessive clothing or both. Any one or combinations of these may give rise to an indigestion. The undigested food in the alimentary canal is promptly invaded by the bacteria which are already present in the intestines or have been introduced with the food and either fermentation or decomposition takes place, which results in the formation of various poisonous substances, which when absorbed into the blood give rise to the symptoms above enumerated.

The breast-fed baby is much less liable to these affections but occasionally suffers. In such instances careful investigation will almost invariably disclose that the mother is ill or has practiced bad personal hygiene or been guilty of some other indiscretion.

It not infrequently happens that a nervous, fretful, feverish, "teething" baby, who refuses his food, on being carefully examined is found to be suffering from disease of the middle ear. Either one or both of the ear drums may be found red-the presence of pus behind it. The symptoms usually quickly subside when the ear drum has been skillfully incised or spontaneous rupture has allowed the pus to escape.

It quite frequently happens that one or other of the acute infectious diseases, with which children are so commonly affected, is in its early stages, before the disease has fully developed, attributed to "teething." These affections may range anywhere from pneumonia, scarlet fever or measles, to diphtheria, meningitis or infantile paralysis. In fact any acute disturbance in which the cause is at all obscure, or not immediately discoverable in a child of suitable age, is almost certainly attributed to the eruption of the teeth. It sometimes happens, in serious illnesses, that much valubale time is lost before proper management is instituted because the trouble was in the beginning attributed to the teeth.

It occasionally happens that in an ailing child, the source of difficulty still remains obscure even after the most thorough, painstaking, repeated and competent examination. Under such circumstances the failure to locate the cause of the trouble should be attributed simply to human limitations and not to the natural process of erupting teeth.

The poor logic of attributing the ills of early life to the eruption of the teeth is evident when it is found as sometimes happens, that some child is in possession of his full quota of temporary teeth and has never been sick. The mother having fed the child rationally and been able to avoid all the contagious and infectious diseases. And again, it is well to remember that children in the first weeks of life manifest the same symptoms, when ill, as those observed in older infants. If however, these signs are observed in a child six or eight weeks of age, no one suggests that they may have some connection with the process of dentition, while if the child has attained the age of six or eight months, someone will appear to assure you that the un-

derlying cause of the whole difficulty is "teething."

Another observation of value is that the appearance of the second set or permanent teeth is never charged with being the cause of illness. If, however, the temporary teeth cause so much difficulty, why is it that the eruption of the permanent ones cause none?

Viewing the matter from another angle may serve to throw some light on the subject. The average healthy baby begins to erupt his teeth about the sixth to eighth month of life, and by the end of the twenty-fourth to thirtieth month the full quota of twenty temporary teeth will have made their appearance. Thus it will be seen that the teeth make their appearance on an average of about one a month. The teeth grow slowly, the absorption of the overlying gums takes time. They do not like mushrooms spring up over night. Since the teeth, as above set forth, make their appearance at frequent intervals it would be almost impossible for a child to pass through any one or other of the diseases which so commonly afflict children of this age, without at the same time, just before or shortly thereafter erupting a tooth. The appearance of the tooth at this time, however, is merely a coincident and not the cause of the illness.

Some adults are fond of recalling and recounting the discomfort and inconvenience they experienced in "cutting" their last molars or so-called "wisdom teeth," and citing this as evidence of the ill effects of the eruption of teeth in the infant.

This is not, however, a parallel condition. In the first place the crown of the last molar is large and broad, while the incisors of an infant is small and sharp, with a cutting edge. In the second place the tissue or gum overlying the molar is more dense, being thickened and toughened from having been chewed upon for some years. It is in consequence less readily pierced by the tooth, while the gum of an infant, provided it is in a healthy condition, is soft, less dense, and yields readily.

Another frequent cause of difficulty with the eruption of the wisdom teeth is the fact that, due to a slight deformity of the jaw, the last molar has insufficient room to make its appearance between the teeth that are already in front and the ramms, or angular portion of the jaw-bone behind. It is then, in consequence, in a state or condition which the dentists term impaction. This may be partial or complete. The slightly impacted molar will push through, in time, with more or less discomfort to its possessor, while the more severely incarcerated one may require operation.

Though your adult affliction with "teething" prohia may recite the horrors of cutting a wisdom tooth as prima facia evidence of what a baby suffers from "teething," he will never go so far as to tell you that he had a high fever, vomiting, diarrhea, a skin eruption or convulsions, or any other of the many symptoms so commonly manifected by a "teething" baby.

In conclusion I say to mothers, don't rub a baby's gums, with your finger or anything else. Aside from the possibility of introducing dis-

ease into the mouth, abrading the delicate mucous membrane and opening the way for infection to enter the tissues, rubbing cause irritation, irritation causes congestion, congestion produces thickening and toughening, and instead of hastening dentition you only hinder and delay it.

Finally, don't attribute any illness of your baby, be it slight or severe, to the cutting of teeth, and thus waste valuable time before instituting proper treatment. This wasted time may mean the difference between saving or losing your baby.

BLOOD TELLS

The following is quoted from one of Billy Sunday's sermons delviered recently in Charleston.

"If I had the power to enact my convictions in law, I would require and compel the prospective husband to show something more than the price of a marriage license. He'd have to show an ability and a disposition to maintain a home; he'd have to show himself sound in mind, sound in body and sound in morals.

I want to tell you, generations yet unborn have the inherent right to be well born. There are multitudes of people not so much borned into the world as they are damned into the world, and their fate is sealed a generation before their mothers kiss them, and if their old grand-daddy or great-grand-dady had been hanged for stealing horses, they wouldn't be in Sing-Sing.

The three plagues of modern times are tuberculosis, alcoholism and veneral disease. The first is subject to some sanitation—tuberculosis. The second, the saloon,—alcoholism is supposed to be restricted by the law; while the third has no control other than the whim and the fancies, the dictations and the passions, and the lust of lustful men and women.

Like products like — in horses, hogs, cats, dogs, canary birds and human beings. These days when the farmer of the country are spending millions of dollars to develop the highest, purest strain of blood in animals all over the land. They hvae learned my friends, that blood tells. BLOOD TELLS.

STATE MEETING
Huntington, May 17-19

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Advertising forms will go to press not later than the tenth of each month.

All advertisement must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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DR. EUGENE A. HILDRETH III

Death has laid a heavy hand on Wheeling in the last few weeks. Men and women who had contributed much to the community, many of whom in the natural course of events would still have had years of high usefulness before them, have fallen before the grim reaper. One of the best known and best loved of these was Dr. E. A. Hildreth III, who fell a victim of the dread pneumonia Saturday morning.

Dr. Hildreth happened to be a member of one of Wheeling's oldest and most prominent families, but it was what he himself had cacomplished and the services he had rendered that won him his particularly high place in the esteem of all who knew him. Following in the footsteps of ancestors who were distinguished in the medical world, he became a physician, devoting his knowledge and skill especially to the eye, ear, nose and throat.

He was not only unusually able

in the practice of his profession, but unusually generous in meeting the great demands upon his time and strength. Men, women and children of all walks of life sought his help, and he gave to all patiently and unsparingly. This great service to others took its toll of his physical strength, so that when he was stricken, his weakened resistance could not cope with the deadly attack.

Dr. Hildreth was in the prime of life and his usefulness to his fellow men was just reaching its zenith. The trained physician is perhaps the most useful man in any community. His relationship to others is particularly close and valuable. when to these general characteristics he adds lovable personal traits, he becomes far more than merely a doctor of physical ills. Dr. Hildreth's patients regarded him, and justly so, as a personal friend, to whom they could confide their problems in the certainty of kindly understanding and counsel.

Now that he is gone, there is in our community a deep sense of loss. It is often said of such a man, that his place will be hard to fill. It is more exact to say that his place cannot be filled. Similar work can be done by others, but of the countless things that go to make up any great personality, there is no duplicate. All that we can say is that he is gone, and only time can soften our sorrow.

APPRECIATION

An appreciation of the Ohio County Medical Society for the services and inspiring work of Dr. E. A. Hildreth III was adopted by the members of the society at a special meeting yesterday afternoon at the Wheeling High School auditorium. The resolution was drafted by Drs. Frank LeMoyne Hupp, W. A. Cracraft, and Ivan Fawcett.

It read as follows:

How rapidly have our colleagues fallen in our Ohio County Medical Society during the last ten months; how frequently have been the opportunities offered for the analysis of character and a study of the life's work.

Far too often have we been called upon to pay homage of our respect and affection for a brother in medicine who has crossed the divide.

We hear no response when the roll is called for the names of L. D. Wilson, Meighan, Aschmann, Bullard and Baird. Bring them back to memory and where will you find a nobler list of faithful, self-sacrificing servants of humanity? Such lives of labor and service need no bronze or marble to perpetuate their glory.

Again "the silver cord has been loosed, the golden bowl broken at the fountain, and the wheel broken at the cistern." Again we have come with heavy hearts and bowed heads to mourn the death of another member, Eugene Augustus Hildreth III, who passed away from life Saturday morning, March 11, 1922.

We are not here to commemorate the incident of our colleague's death, but to put on record the triumph of his useful life.

We are here to speak of his invaluable service to the state and

county medical associations; to speak with praise of his fearless, courageous work in peace and in war; to exploit the merits of his inspiring papers and helpful discussions on the floor of this society.

His was a life which overflowed with invincible vitality, with love and with service. Success, suffering and even death to him were werely incidents in a journey toward the fullness of being.

Dr. Hildreth had a keen, active mind, tireless energy, a skillful hand. He was devoted to his patients, seeing always the soul back of the disease he treated. His brilliant flashes of wit, his matchless bedside manner, commanded loyalty, respect and confidence. Truly it was a friend he healed and comforted.

We, his colleagues, cannot but think of him as having made the supreme sacrifice for his brother man by counting his life but nothing. "Greater love hath no man than this."

Good done on so large and so generous a scale for the rich and poor shared his rare talents in equal measure is a living and pulsing thing that can never die.

The city of Wheeling is better for his living, and the whole medical profession the stronger and cleaner for his works. He has closed his short, full day, swiftly and splendidly amid all men's praise.

While this good brother has surrendered his soul to his maker, in whom we live and move and have our being, and while we recognize that our loss and that of this whole valley is irreparable, it is for us to carry on and keep the faith.

Resolved, That this appreciation be spread upon the minutes of our Ohio County Medical Soceity, and that we extend to the bereaved wife and family our deepest expression of concern, and share with them their burden of sorrow.

For the Ohio County Medical Society.

FRANK LeMOYNE HUPP.
W. A. CRACRAFT.
IVAN FAWCETT.

County Society Reports

December 13, 1921.

The Fayette County Medical Society met at Thurmond in the assembly room of the Dunglan Hotel on December 13, 1921, at 8 o'clock p. m., with the following members present: Drs. J. H. Bannister, Thurmond, W. Va.; Dr. H. C. Skaggs, Montgomery, W. Va.; Dr. H. L. Goodman, McKendree; Dr. L. O. Fox, Ansted; Dr. L. S. Henley, Fayetteville; Dr. E. J. Grose, Fayetteville; Dr. S. W. Price, Scarbro; Dr. W. E. Smith, Minden; Dr. W. E. Bruce, Willis Branch; Dr. C. W. Lemon, Claremont; Dr. E. S. Hamilton, Oak Hill; Dr. W. P. Fawcett, Beury; Dr. G. P. Evans, Layland; Dr. J. W. Hopkins, Fayetteville; Dr. C. F. Grissinger, Kilsythe; Dr. W. B. Baker, McKendree.

The meeting was called to order by the president, Dr. H. C. Skaggs, and the minutes of the last meeting read by the secretary, and there being no objection they were approved as read.

Clinical cases were reported by Drs. Grissinger, Hopkins, Hamilton

and Fox, and were discussed by all members present.

Dr. S. W. Price of Scarbro, gave a very interesting talk on, and explained the work of the American Red Cross in the county, the difficulties met and the needs of the local chapter, and after a full discussion the following resolution was offered by Dr. C. F. Grissinger, seconded by Dr. Lemon, and unanimously carried:

WHEREAS; The American Red Cross Society is making an effort to give relief to those in destitute condition in the county; therefore be it,

RESOLVED, That we, the Fayette County Medical Society, endorse the efforts of the American Red Cross Society in this noble work and proffer our services in extending the American Red Cross such assistance as we are able to give.

Dr. H. L. Goodman, superintendent of McKendree Hospital No. 2 called the attention of the members present and also to the Red Cross to a recent law that has been passed whereby any deformed or crippled children could be sent to the State Emergency Hospital at McKendree for care and treatment without cost to parents who were unable to pay for their care and attention, and offered the services of the hospital staff in these cases. Dr. S. W. Price on behalf of the American Red Cross and the Fayette County Medical Society moved that a vote of thanks be extended to Dr. Goodman by the society for calling attention to the above cases, and for offering services of the hospital staff in needy cases, and on second of Dr. Smith same was unanimously carried.

The following resolution offered by Dr. C. F. Grissinger, seconded by Dr. J. H. Bannister, and on a vote unanimously carried:

WHEREAS; The West Virginia Tuberculosis Association is making an effort to find all children in the county afflicted with tuberculosis, with the object in view to placing them in a camp this coming summer, for the purpose of rest, benefiting them by the good that will result from an out doors life, and to teach them many things that tend toward the cure of the disease and its prevention; therefore be it,

RESOLVED, That the Fayette County Medical Society does heartily endorse this movement and will lend their services toward its advancement.

On motion of Dr. Lemon, seconded by Dr. Evans, and unanimously carried, the secretary-treasurer of the society was instructed to buy for the society a ten dollar bond of the West Virginia Tubercular Association.

The secretary presented the name of Dr. W. B. Baker of McKendree, for membership, and upon motion of Dr. Grose, seconded by Dr. Fox, the by-laws were suspended and Dr. Baker duly elected a member of the society.

The following officers were unanimously elected for 1922:

Dr. S. W. Price, president; Dr. L. O. Fox, first vice-president; Dr. J. H. Bannister, second vice-president; Dr. H. L. Goodman, secretary-treasurer, re-elected.

Dr. J. W. Hopkins made a motion that the Fayette County Medi-

cal Society endorse for full time health officer of Fayette county, Dr. L. S. Henley of Fayetteville, and upon a second by Dr. Fox and Dr. Grose same was voted upon and the motion lost by a vote of 12 to 4.

Dr. Henley asked that there be included in the minutes of this meeting that Dr. Grissinger stated that he was opposed to a full time health officer, not Dr. Henley personally.

There being no further business the society adjourned on motion of Dr. Lemon, seconded by Dr. Bannister, to meet at Oak Hill in February.

Membership 51.

H. L. GOODMAN, Sec.-Treas.

February 11, 1922.

The Fayette County Medical Society met at the residence of Dr. E. S. Hamilton, Oak Hill, on the night of February 11, 1922, with the following members present: Doctors Fawcett, Hamilton, Smith, Penn, Bruce, Hoskins, Wheeler, Price and Goodman.

The meeting was called to order by the present, Dr. S. W. Price, and Dr. R. L. Penn made a very interesting talk on Acute Appendicitis, relative to primary symptoms, which was very much enjoyed by all present and discussed by Dr. Wheeler, Smith, Hamilton and Goodman. Dr. E. S. Hamilton read a very interesting paper on What are you going to do about it, and appreciated by everyone.

The by-laws were suspended by motion of Dr. Bruce, seconded by Dr. Smith and Dr. S. W. Simmons was duly elected a member of the society.

Dr. Hamilton reported a case of ruptured uterus, which was discussed by Drs. Penn and Smith.

On motion of Dr. Penn a vote of thanks was extended to Dr. and Mrs. Hamilton for the excellent refreshments and enjoyable evening spent with them by the society.

There being no further business the society adjourned to meet at Mount Hope the second Tuesday night in April.

The Little Kanawha and Ohio Valley Medical Society met Thursday evening December 1, 1921, at the Y.M.C.A. auditorium and had as their guest Dr. Frank LeMoyne Hupp of Wheeling, and the public of Parkersburg, W. Va. Dr. Hupp gave an excellent paper on the subject of cancer, and was enjoyed by all present. At the conclusion of the public meeting the Little Kanawha and Ohio Valley Medical Society met and considered several matters of importance, the most important of which was the appointing of a committee to formulate plans for a free clinic at the City Hospital. The clinic will be in operation by January 1, 1922, and the charity of Wood County will be treated without cost. Dr. Geo. B. Faber of Rockport, Wood County, was elected to membership in our society. At the regular meeting, which will be held Thursday evening, January 5, 1922, officers for the year 1922 will be elected and there will be a banquet for the members of the society.

W. B. RICHARDSON, Secy-Treas.

ST. LOUIS SESSION

The local committee of arrangements for the annual session to be held in St. Louis May 22,26, 1922, has designated the following headquarters for the sections of the scientific assembly:

Practice of Medicine, Hotel Statler.

Surgery, general and abdominal, Hotel Jefferson.

Obstetrics, Gynecology and Abdominal Surgery, Hotel Claridge.

Ophthalmology, Planters Hotel.

Laryngology, Otology and Rhinology, Marquette Hotel.

Diseases of Children, American Hotel.

Pharmacology and Therapeutics, American Annex.

Pathology and Physiology, American Annex.

Stomatology, Warwick Hotel.

Nervous and Mental Diseases, Majestic Hotel.

Dermatology and Syphilology, Majestic Hotel.

Preventative Medicine and Public Health, Warwick Hotel.

Urology, Maryland Hotel.

Orthopedic Surgery, Hotel Jefferson.

Gastro-Enterology and Proctology, Maryland Hotel.

Dr. Louis H. Behrens is chairman of the sub-committee on hotels. He may be addressed at the office of the local committee on arrangements, 3525 Pine street, St. Louis.

The sub-committee on hotels requests those desiring hotel reservations to write directly to the hotel of their choice. It also suggests that this shall be done at an early date and that duplicate reservations shall not be made. If difficulty is experienced in securing the desired accommodations, the hotel committee on request will assist in every way possible. Arrangements have been made with the several hotels so that all communications will be referred to the sub-committee on hotels in case the hotel addressed is unable to provide the desired accommodations.

State and General News

Dr. James Boyce Taylor of the Chesapeake & Ohio Hospital staff, who had his good leg broken when he was struck by an automobile several months ago, is now able to be about on crutches. In order to make the most of the period of disability which is still ahead of him, Dr. Taylor will leave Monday for Houston, Texas, where he will visit his sister. His son, Lee Taylor, will accompany him to the south.

—

Dr. Cassius Clay Hogg, pioneer physician of Huntington, is now a patient in a sanatorium in Cincinnati, whither he was taken earlier in the week by his friend and associate, Dr. C. T. Taylor. Dr. Hogg, who has been in ill health for several years, recently underwent a slight stroke of paralysis.

—

Dr. and Mrs. Hansford of Pratt, were visiting in Charleston last week.

Dr. W. D. Hereford, who has been attending the American Congress on International Medicine in Minneapolis, Minn., has returned home. He was accompanied by Mrs. Hereford.

—

Dr. Harry E. Solter, who has been visiting his family in Huntington has returned to Marlinton, W. Va.

—

Dr. A. S. Jones, a well known surgeon of Huntington, was on the program of the State Medical Association at Bluefield, W. Va., last week. Dr. Jones formerly lived in Bluefield. He renewed old acquaintances in that city.

—

Dr. and Mrs. R. H. Pepper, of Huntington, have returned from Rochester, Minn., where Dr. Pepper was under the care of specialists at the Mayo Hospital. Dr. Pepper is much improved and is now at his home.

—

Dr. Powell from Fairmont passed through Huntington a short time ago enroute to Charleston.

—

Dr. J. E. Rader of Huntington, left on Chesapeake & Ohio train No. 3 for Cincinnati. He will be in that city on business for several days.

—

Dr. W. E. Vest of Huntington has returned from Rochester, Minn., where he took some special work at the University of Minnesota, and also attended the Mayo clinics.

—

Dr. Chas. A. Pyror and sister, of Huntington, spent some time recently at Atlantic City and New York.

Dr. J. H. Caldwell of Wheeling, was ill recently in a hospital in Cleveland, O.

—

Dr. Kent Royal, formerly of Sheltering Arms, and recently of Welch Hospital, has returned to his home in Massachusetts.

—

Dr. G. E. W. Hardy, of Baltimore, assistant to Dr. Fumly for the past three years, is now surgeon at the Welch Hospital.

—

Dr. Rutherford, superintendent of Welch Hospital, has returned from a short stay at Rochester, Minn., where he attended Mayo Clinics. On his way back he stopped at Chicago and took a course in Dr. Emmet A. Printy's Laboratory of Surgical Technique.

—

GOLDEN WEDDING

Dr. J. Howard Anderson, Marytown, W. Va., spent February 14 at the home of his parents at College Hill, Beaver Falls, Pa., where he participated with four sisters and two brothers in celebrating the fiftieth anniversary of the marriage of his parents, Rev. and Mrs. T. B. Anderson.

—

Dr. and Mrs. I. D. Cole of Clarksburg, visited at Fairmont this month.

—

Dr. Walter C. Swann of Huntington took post-graduate work at Cincinnati in nose and throat work recently.

—

Work on construction of a two-story building adjoining the Hawes-Marple Hospital on Eleventh street was started a few days ago. The

new building is to be used largely for hospital work, the entire second floor to be fitted up to adjoin the second floor of the present hospital building. The first floor of the building will be occupied by a store room.

With completion of the addition eleven rooms will be added to the Hawes-Marple Hospital, giving it a total of thirty-one rooms.

MEDICINE AND SURGERY

SPUTUM EXAMINATION

Specimens of sputum are examined less carefully, as a rule, than any other material from the body, possibly excepting the feces, and yet a considerable amount of information can be obtained from the study of it, provided the specimens are properly obtained. Too frequently specimens are mixtures of buccal, pharyngeal and nasopharyngeal, secretions with some admixture of bronchial material. Examination of such mixed specimens is, if not valueless from a pulmonary standpoint, at least misleading.

On the other hand studies of sputum raised by a true pulmonary coughing act may give information which, taken together with x-ray studies of chest plates, is exceedingly valuable for diagnosis, prognosos, and treatment.

There is no need to recount the value of sputum examinations in tuberculosis, except to note that modern methods of digestion of the material with alkali followed by centrifugalization (Raphael and Eldridge) gives more accurate results than the older method of merely smearing the material on slides.

In asthma too, very useful information may be obtained in making a differential diagnosis.

Asthma may be of several origins. It may be a disease sui generis. It may be a symptom of renal or cardiac, or pulmonary disease. The characteristic laboratory finding in true bronchial asthma is eosinophilia in the sputum, and this according to Bezancon and Dr. Long has almost as much value in the diagnosis of asthma as the finding of tubercle bacilli in the diagnosis of tuberculosis. According to these writers Charcot-Leyden crystals, and Curschmann's spirals are of little significance. Also they say the sputum in true asthma is free from albumin which appears only in complicated cases. It is especially in men over fifty who present attacks of nocturnal dyspnea of an asthmatic character that sputum examinations have a special value in determining whether the disease is true asthma, or whether it is a cardiovascular affair.

It is not, however, only in tuberculosis and asthma that microscopic study of the sputum is of real diagnostic value. In bronchial spirochetosis, for instance, a disease which in many respects resembles influenzal bronchitis, certain types of pneumonia and tuberculosis, the diagnosis can only be established by careful study of the sputum. Mason has recently reported a case of this infection in which the spirochetes were found in a pleural empyema. Rapid improvement followed intravenous salvarsan. Pulmonary streptothricosis is another

disease which, though it may resemble clinically other types of lung infection, for instance tuberculosis, is due to the presence of filamentous organisms which show true branching. Such cases are sometimes referred to as pseudotuberculosis. Bridge in California has reported fifteen cases of pulmonary streptothricosis. In some of his cases the streptothrix was associate dwith the tubercle bacillus. In one of Zenoni and Macchi's cases there was a pure streptothrix infection. In pure cases there was no tendency for the disease to begin in the apex of the lung as in tuberculosis; the fever was rarely high, and emaciation was not rapid. Hamman says of these cases that the clinical symptoms are those of tuberculosis except for the localization in the lower lobes. In such cases both sputum examinations and radiograms have a place.

Occasionally certain species of molds attack the lungs, most frequently that known as aspergillus fumigatus. Usually it is a secondary invader in tuberculous cases, but as Hamman says it may affect the lungs primarily causing ulcerative and suppurating lesions. Aspergillus fumigatus is widely distributed in the outer world and may be found on vegetables, grain bread and other food stuffs. It is presumed that infection follows inhalation of the spores. There is nothing characteristic in the clinical picture of aspergillosis, and a diagnosis can only be made by microscopic examination of the sputum. In primary tuberculous cases the organism adds nothing important to the clinical symptoms. When the infection is primary the symptoms are those of chronic tuberculosis. A bronchial form which runs the clinical course of a chronic bronchitis has been described.

Pulmonary actinomyces is comparatively rare, but the microscopic find are characteristic. In the early stages the diagnosis can be made only by discovering the organism in the sputum. In the later stages it is difficult to distinguish it from tuberculosis, carcinoma, bronchiectasis, abscess, etc., without the characteristic microscopic findings.

Since the last great epidemic of influenza many cases of chronic bronchial and lung diseases have appeared that are often difficult to diagnosticate without careful bacteriologic examination of the sputum. Many such cases resemble tuberculous disease, but because of the consistent of tubercle bacilli they have been called "localized bronchitis," "subacute and chronic nontuberculous lung infection," "a lobular form of bronchopneumonia of long duration," etc. Field in discussing such cases says that the onset may occur at any age, but is commonest in children. The syndrome usually follows acute disease, which particularly affects the upper respiratory tract, such as measule, whooping-cough, and influenza. In some cases it comes on insidiously. Both the onset and exacerbations occur most frequently during the colder months, probably owing to crowding in ill-ventilated rooms. Chronic sinusitis is probably present in all the cases. B. influenza is the most frequent predominating organism, but any of the common invaders, streptococci, staphylococci, pneumococci, and micrococcus catarrhs, may appear. The process tends to pulmonary fibrosis, or, lat-

er, to bronchiectasis and interstitial pneumonia. In these cases the x-ray is of assistance only in locating the lesions, which are usually not typical as in tuberculosis.

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BOOK REVIEWS

Clinical Diagnosis: Fifth edition, by Charles Phillips Emerson, A.B., M.D., Professor of Medicine, Indiana University School of Medicine; J. B. Lippincoff Co., Philadelphia.

This excellent book is essentially a new work, rather than a revision. The author takes the very commendable view that "the present separation of laboratory and ward is an evil which cannot be too strongly condemned" and that "the one who takes the history of the patient and makes the physical examination is the only one who can interpret correctly the laboratory findings." Throughout the book the idea is foremost that the function of the laboratory finding is to illuminate the case under study. The style is very pleasing, and what we might call the human element predominates. An occasional illustrative case history is introduced. The chapter on blood is very full. The descriptions of non-surgical biliary drainage and Vincent's Agina are interesting, although the latter is somewhat disappointing. This volume is to the laboratory worker what the author's excellent Essentials of Medicine is to the nurse.

Nostrums and Quackery: Compiled by Arthur J. Cramp, M. D. Press of American Medical Association.

This is an exhaustive resume of the patent medicine manufacture and exploitation in America.

What a commentary on human credulity is this shameless business, conceived in versality, born of avarice and developed by and through the cupidity and ignorance of the masses, it has grown strong indeed through the years.

But for the destructive, harmful phase of the matter, the whole subject would be ludicious; but when one visualizes the hundreds and thousands of physical wrecks—poor pathetic and jetsam on lifes unending sea as its results, men and women buying and paying for stump water and glycerized filth out of scant purse under the delusion that such mixtures can add vigor or in any way either niherit or terminate disease, then the whole matter becomes damnable—a public menace, and deserves publicity and organized censure to destory it.

A careful perusal of this compliation will give one a workable comprehension of the shallowness of every claim, the utter worthlessness of every Nostrum and thus in the end by complete and relentless publicity bring about the overthrow of

a systematic fraud such as is as astounding and far-reaching as it is disgraceful to us as an intelligent people.

No Nostrum vendor can ever enter the world's court of equity and pray for a verdict; into this court the medical profession can come with clean hands, let the issue now be drawn.

CEREBRAL EMBOLISM FOLLOWING ARREST OF AURICULAR FIBRILLATION BY QUINIDIN.

The diagnosis in the case cited by Frank N. Wilson and George R. Herrmann, Ann Arbor (Jour. A.M. A., March 25, 1922) was cardiosclerosis with auricular fibrillation and heart failure. The patient was given two preliminary doses of quinidin sulphate, 3 grains (0.2 gm.) each, which produced no unusual symptoms. On the following day (January 21) he received three doses of 6 grains (0.4 gm.) each at four hour intervals. Aside from a conspicuous increase in heart rate, no special effects were noted. After a fourth dose of the drug on the following morning, it was found that his pulse had become regular. About eight hours later he complained of sudden numbness of the left side of the body and left extremities, and of being unable to see well objects to the left of him. Examination revealed weakness of the left arm, diminished knee jerk on the left, and left homonymous hemianopsia. He was seen by Dr. C. D. Camp, who made a diagnosis of "extrapyramidal hemiplegia due to a lesion in the neighborhood of the right optic thalamus." Up to March 1 the auricular fibrillation had not returned. The neurologic signs were still present but less conspicuous. There can be little doubt that they were the result of cerebral embolism.

POSSIBLE RELATION OF CHRONIC COPPER POISONING TO HEMOCHROMATOSIS

A decade ago it was the custom of some canners to add solutions of copper salts to canned vegetables; this was done to give the food a green and fresh appearance. In 1913, the Referee Board of the United States Department of Agriculture disapproved this process on the general principle that the amount of this heavy metal retained in the body cannot be considered desirable; however, it was also found that the amount present in foods thus treated is apparently not sufficient to cause any demonstrable harm in man.

Copper, as is well known, often enters food in unintentional ways, as from use of the metal in cooking utensils and distilling apparatus, or as an ingredient of insecticidal sprays used on plants. The fact that men in trades in which copper is used show no particular effect from it also adds support to the view that copper in small amounts has no harmful results. Nothing could be more striking than the saturation with this metal of the workers in some branches of the copper industry, for not only is the hair green, but the urine and even the bones are of the same color; yet colonies of such workers have been observed with the greatest care and for generations, always with the

verdict that no injurious effects can be ascribed to the copper. Such copper-saturated men live as long as others, are robust and active, have no special symptoms ascribed to the copper, are subject to no special diseases, and may work in an atmosphere full of copper dust until they are octogenarians. Certainly most of the animal experimentation heretofore reported has supported the clinical evidence of the harmlessness of copper in small doses, even though repeated for a long time.

Recently Mallory, Parker and Nye found that, in rabbits given small amounts of copper salts by mouth daily for from six to twelve months, a pigmentary hepatic cirrhosis results which, in essential details, resembles the pigmentary cirrhosis of human hemochromatosis. They therefore advance the hypothesis that this rare but interesting disease may depend on the binding, by copper, of the hemoglobin set free during normal hemolysis, so that it is prevented from passing through the normal cycle of processes that leads either to new formation of hemoglobin or to the excretion of iron from the body. The copper pigment compound is deposited in the tissues, especially the liver, and there, acting as a foreign body, leads to fibrosis. This is an interesting suggestion, but difficult of proof in view of the infrequency of human hemochromatosis. If true, one might expect a high incidence of bronze diabetes in those Asiatic countries where throughout life virtually all the food is cooked and served in copper vessels, and where relatively large amounts of copper are found in the livers of the inhabitants—Jour. A. M. A.

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Huntington, W. Va.

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THE MENTAL DEFECTIVE IN WEST VIRGINIA AS FOUND BY A RECENT SURVEY

Read at the Fifty-fourth Annual Meeting of the West Virginia State Medical Association, Charleston, W. Va., May 24th, 1921.

By

L. V. GUTHRIE, M. D., Chairman State Mental Hygiene Commission.

Superintendent State Hospital, Huntington, W. Va.
Neuro-Psychiatrist U. S. Public Health Service for West Virginia.
Medical Advisor State Board of Control.
Senior Examiner Cabell County, W. Va., Mental Hygiene Commission.
Auditor American Psychiatric Association, Etc., Etc.

For many years I had been ambitious to study the mental defective in West Virginia, from a broad and intimate contact, and commencing a year ago I had this ambition gratified when Governor John J. Cornwell appointed a commission for the purpose of a survey of the state to be made in conjunction with the National Committee for Mental Hygiene.

The representative of the National Committee who was the Medical Director of the West Virginia survey assigned me to the work of supervising the examinations of inmates of county jails and almshouses. This arrangement from many standpoints was less pleasant and more laborious than examining the inmates of State institutions, yet at the same time was exactly what I desired. I was quite familiar with the State institution end of the subject, and had been dealing with the end product of heredity degeneracy for a quarter of a century. This plan gave me an opportunity to study the situation from another viewpoint.

Before proceeding further, it is, I think proper to briefly discuss the subject of mental defectiveness from a social and scientific standpoint. As applied for the purpose of this paper, Mental Defective is used synonymously with idiocy, imbecility,

feeble - mindedness, backwardness, the moron, the sub-normal and the dull normal. The difference in these terms is understood to mean of degree and not of kind. This condition usually arising from congenital defects, the result of arrested cerebral development and not usually the result of pathological changes.

In degree we have first the lowest form of human existence—the Idiot, who is without understanding from birth, is helpless and must be cared for as an infant, and his mental development may be compared with a normal child up to two years of age. From the very nature of this lack of development the problem is simply one of care on the part of the parent or others. Marked improvement is entirely out of the question and if we succeed in teaching the subject to give proper attention to the calls of nature (micturation and defecation) you are doing well. Many of these unfortunate children, from the lack of intelligence, are never able to feed themselves and remain at the third or fourth month infant level.

The next group—the Imbecile—on the other hand is able to understand many matters and, while unable to care for himself if left alone in this world of complex reactions and surroundings, is capable of doing much under the direction of others. The imbecile covers a large range in classification and he has much greater possibility of development than the idiot. He may well be compared in mental capacity to the normal child of two to seven years. The word "Imbecile" should be construed to apply to the mental development or lack of mental development in the individual. It has no reference to his or her physical infirmaties, however, there may be and often is great physical defect. The imbecile is much more of a problem from a social standpoint than those in the preceding group. He may be a great menace to society, committing murder, arson or rape, and unlike the idiot, he is capable of procreation. He is not able to plot or plan complicated offenses, but may imitate; to illustrate, an imbecile sees a farmer killing hogs and later in the day meets a young normal child in the public road and slaughters the child as he had seen the farmer slaughter the hogs. The imbecile may also easily become the dupe of a wiser mind. Individuals of this group are frequently not the in-offensive, harmless class they may appear to be, and the only homicide I have had among my patients in State hospitals was committed by one of this class.

As we ascend the degrees of mental development we reach the moron or feebleminded, or as is sometimes called, the high-grade imbecile who is capable of great improvement by educational methods and may, under favorable conditions, become self supporting. These individuals at maturity may be compared in their mental capacity to the normal child of from eight to twelve years of age.. It is among this class that many criminals and prostitutes are found. The moral stamina is frequently NIL and the individual may be a menace to society. The word "defective" as applied to individuals in this class has no reference to their physical condition, for frequently they are perfect in physique.

By educational methods, I do not mean as applied to normal persons,

but as applied to the healthy, frequently well developed grown-ups or to youths with the mental level of children from eight to twelve years of age. These individuals under proper surroundings frequently make good laborers, and instead of attempting to teach them elocution, higher mathematics, etc., a limited amount of instruction in the elementary branches is all that they will absorb and profit by. Their best instructor is one who teaches them in connection with the elementary branches, to be dependable, honest, and truthful and to WORK. Success in teaching this class depends upon patience, the application of stimulus forcibly applied and at frequent intervals. They make good road builders, brick-makers, cement workers, and the higher grades are sometimes found among the useful occupations. Work under supervision, if necessary, is their best friend. The farm, dairy, road building, etc., gives the male moron an outlet for his energy, and the kitchen, the household, laundry and other domestic service in country or small towns, is far better for the female moron than the "sweat-shops" of our cities. The male moron when anti-social is more inclined to acts of violence and the female moron has more inclination to petty thievery, lying and for obvious reasons the sex problem becomes more serious with her after puberty than with the male.

The tendency to deliberate falsehood, I have found especially marked among the female defectives of the higher grade, and frequently the fabrication has woven through its texture the libido of the degenerate pervert with only the resisting and repressing influence of a child. In placing these girls out in families it is well to remember that not only the girl should be protected from evil or designing men who may be in the household, but the male members of the household should be protected from the lying tongue of the high-grade defective. As witness before the court this class will tell his honor upon being questioned that they "comprehend the nature of being sworn to tell the truth," and then proceed without a blush to maliciously lie if it suits their purpose, or if the lie is suggested to them by other persons. In my judgment, it is rare indeed that this class should be considered competent witnesses unless their statements are corroborated by responsible parties.

This third class is less understood by the laity than the idiot and imbecile, and it has only been in the last few years that those slightly defective have been seriously considered. Even now the general public has little interest in or comprehension of this serious blight. Each of these three great classes or degrees of mental deficiency is capable of sub-division into low, middle and high-grades, and again into combinations as idio-imbecilic, etc. All of the above conditions meaning mental deficiency, arise from congenital defects or from conditions beginning with life, or at the period in the individual's existence when the intellectual powers should be expected to become manifest, and should not be confused with mental impairment occuring later in life. In the former condition known as idiocy, imbecility, feeble-mindedness or the moron, the individual has not been robbed of mentality that he at one time possessed. These

individuals have from the beginning been in mental want, never were normal and never can be, while in the mental impairment, dementia, occuring in later life the individual has lost something that he formerly possessed. Proper nomenclature draws a well defined difference between these terms. The latter is a form of insanity depending upon pathological changes.

It has been forcibly stated that "every Moron is a potential criminal, as he lacks the understanding of right and wrong and has not the power of self control, and the individual as an adult who is deficient in these essential factors to moral life will or will not become a criminal dependent upon temperament and environment."

The high grade mental defective furnishes a type of mentality which is truly perplexing. It has been estimated that from twenty-five to fifty per cent of the population of the various penitentaries belong to this class, and the majority of prostitutes, thieves, ne'er do wells and many juvenile delinquents belong to the same class. We must remember, however, that "boys will be boys" and it is not infrequent that these juvenile delinquents are responding to certain savage instincts, which have not been eliminated, controlled or re-directed. The youthful offender should not be harshly condemned till his family history and environment have been examined and their influences determined.

From a social standpoint the imbecile and moron may be divided into two great classes, the good and the bad. Under proper environment there are more good than bad and under bad environment the good are easily made bad, while some of the viciously bad even under the best of environment will never make good. We will all have better understanding of these cases after they reach puberty and adolesence if we remember that we are dealing with sub-normal individuals, and, without regard to their chronological age or personal appearance, are doomed to have juvenile minds the rest of their life.

As a disseminator of veneral diseases the female moron has no equal. The higher grades having sufficient mind to carry out plans and frequently comprehending no moral code, are much more of a problem than the low grade cases. These conditions above referred to have a demonstratable anatomical basis—poor quality and quantity of gray matter—and the cause is usually given as "heredity"—an inferior family stock resulting from defective germ plasm transmitted from one generation to another.

Cases resulting from injury to head at time of birth or in early childhood, cerebral and meningeal infections, etc., or bad health on the part of the mother during pregnancy or acute alcoholism at time of conception may usually, where there is no hereditary tanit, be considered "accidental cases."

The stigmata of degeneration is prominently marked in many cases, but not in all, and often the moral defect overshadows the mental. A more or less total disregard for the consequences of their acts often stands out in the clinical picture. The responsibility of motherhood rests very lightly on the moron, and if they excell in anything it is usually good physical health and sexual equipment. From the above

description it may be clearly seen that the class of individuals under discussion furnish fertile fields for delinquency and crime.

Psychometric examinations at the State prison at Moundsville showed out of 530 prisoners tested, 69 per cent deviated from average normal mental health; 45 per cent had the mental level of the average American child of twelve years of age or under, 28 per cent were feeble-minded.

The Industrial home for Girls showed 48 per cent of the inmates had the mental age of the average American girl of 12 years or under, (and only one girl was under the chronological age of 12 years.) Thirty-one per cent of these girls were feeble-minded; practically the same condition existed at the Boys' Reformatory. Among the inmates of our county jails we found 60 per cent suffering with some abnormal mental or nervous disease and of these inmates, 28 per cent were found to be feeble-minded.

Two hundred and forty prisoners in jails out of 595 in the State were carefully examined; 60 per cent of these individuals were suffering from some abnormal nervous or mental condition, 28 per cent were feeble-minded, and I have reason to believe that the same ratios would prevail had the entire number been examined. County almshouses and county aid in the fifty-five counties of the State showed, at the time of the survey, 1,120 persons were being cared for by the respective counties. Sixteen counties selected at random in the different parts of the State where examined. Two hundred and sixty-nine inmates of the sixteen counties showed 41 per cent feeble-minded and 22 per cent suffering from mental disease or deterioration. Fifty-one per cent were suffering from chronic physical diseases and the medical attention furnished was not always ideal. Of the 78 immoral women found in jails, houses of refuge and Industrial School for Girls, showed about 69 per cent subnormal in intelligence, or handicapped by serious mental conditions. Thirty per cent were distinctly feeble-minded.

The West Virginia Childrens' Home at Elkins at the time of the survey was caring for twenty-eight children. Sixteen of these children were normal and twelve were feeble-minded.

The mentality of 141 children at the Odd Fellows Childrens' Home at Elkins showed five per cent feeble-minded.

Out of 2,280 school children examined about three per cent were mentally defective. City schools gave about two per cent and the rural districts showed a higher per cent of defectives. This is in keeping with the army statistics showing that three-fourths of the feeble-minded come from rural districts. The above statistics I find compare favorably with schools and institutions throughout other parts of the country. In fact, from our study and examinations of the mental defective in West Virginia, we found no abnormal per cents as compared with other states where the same kind of examinations have been made.

Our State has been criticised for alleged lack of institutional care for the feeble-minded, and "Mental Hygiene" the official organ of the National Committee, states on page 626, July 20, 1920 as follows:

"Growth of provision for this

class has greatly increased during the past few years so that now only five states in the Union have failed to make any institutional provisions for the feeble-minded—West Virginia, New Mexico, Nevada, Arizona and Idaho." This statement is unfair to our state and **is not borne out by facts.** The state including counties has paid out for the benefit of the feeble-minded or mental defective more than two million three hundred thousand dollars at the Huntington State Hospital during my incumbency. Approximately fifty per cent of this institution's population belongs to this class. It was founded in 1897 to care for the idiot, imbecile and epileptic and has, I think, served its purpose well.

In addition to the above amount hundred of thousands of dollars have been disbursed from the State Treasury for the care of the mental defective; at the Girls' Industrial School at Salem, 31 per cent; the Boys' Reformatory at Pruntytown, 30 per cent; the State Orphanage at Elkins, 57 per cent; State Prison at Moundsville, 28 per cent.

All these institutions are teaching this class of inmates to work, to be dependable, honest, truthful, and law abiding citizens. I know this from personal contact with these institutions.

This institutional care above referred to is all of a practical kind and is a great benefit to the class under discussion, and also gives little opportunity for propagation. While this, I admit, may not be considered ideal from the standpoint of the theorist and not as satisfactory as a separate institution for defectives, yet at the same time our State should not be misrepresented in the matter, especially when it is admitted that no state in the Union is caring for more than ten per cent of its feeble-minded and that in New York State there are more than 40,000 mental defectives not receiving institutional care.

It is admitted that millions of dollare are annually disbursed from public funds on account of mental defectiveness in its various forms. This class as clearly shown makes up a very large per cent of the inmates of state prisons, reformatories, jails, county almshouses, etc., and also furnish a large per cent of prostitutes and their wake of venereal disease, suffering, bad heredity in future generations etc. It has also been conclusively shown that when both parents are feeble-minded, practically all of the children are feeble-minded, that the progency of the slightly feeble-minded mother nearly doubles the average number of offspring of the normal mother, and that multiple births occur ten times as often as among normal women. Re-appearing from one generation to another with the regularity of fate, often doubling and trebling itself — this blasting degeneracy should be suggestive of a rational treatment.

For the known anti-social strain, the stream should be damned at its source, and fortunately the surgeon has a remedy that tends to the future health, comfort and happiness of the anti-social defective.

The X-ray properly applied also gives promise and is worthy of future trial. Asexualization adds greatly to their liberty when confined in institutions by lessening the perpetual surveillance.

We should not contemplate indefinite institutional care for the law

abiding industrious mental defective on account of her or his inability to answer academic questions or do performance tests as applied by a psycho-clinician. To do this would possibly be an injustice to the individual and would entail an enormous expense of the State and interfere to some extent with the economic affairs of the nation. A State institution for this class should be for training and promptly returning to useful occupations in as large numbers as consistent with the public welfare. The anti-social should be indefinitely detained and this applies to the low grades who may be without friends or relatives and incapable of profiting by training.

The parole system should be wisely and carefully instituted and early training in an institution should make possible a large number of cases who should become useful on the farm and elsewhere under properly selected occupations.

The Legislature in 1921 has authorized the establishment of a state training school and when proper funds are available for this purpose it should be established. In our public schools special classes should be provided for backward children, but this should be done in a manner, if possible, to avoid the stigma of fastening to a child's name the title of "Mental Defective."

The school authorities should be quite sure of the mental defect before placing the child in this class, for it is not infrequent that a purely physical condition may cause backwardness in the school room.

In conclusion we should carry home with us the fact that—The predominant cause of feeble-mindedness in its various forms in 80 per cent of cases is heredity. The remaining twenty per cent of cases, may be classified as accidental.

The female mental defective is, as a class, as productive of prostitutes as a fertile tract of uncultivated land is of weeds, and like the weeds of the field they are of no benefit or profit to anyone in the universe. Lazy, debased, immoral, carriers of syphilis and gonorrhea, shunned by all respectable people of all nations, they are at all times a disgrace to the human race and in the time of war are a positive menace. The Western Social Hygiene Association informs us that through American prostitutes, directly or indirectly, 445,000 registered men not called in the first draft have been infected with syphilis alone, and of this number 5,800 are West Virginians. Statistics show that in one year the deaths from small pox in the entire United States were 134 persons, while in New York alone during the same year 590 people died from the results of softening of the brain, dependent upon previous infection with syphilis.

Throughout the civilized world there has been for many years a steady increase in the ratio of feeble-mindedness to the normal population, and the cost has mounted to many billions of dollars, not to mention the resulting crime, poverty and sorrow.

There should be more co-operation among those interested in the upbuilding of the human race, and there should be greater knowledge concerning the damaging effects of bad heredity, syphilis, unwise mating and immoderate use of alcohol. The dissemination of this knowledge should be undertaken with candor and boldness. These insidu-

ous dangers to society are altogether too great to palliate or excuse the slightest hesitation or timidity on the part of those who possess the light of better understanding. If left to the feeble-minded to work out you may, of course, depend upon failure.

A CASE OF HEMOLYTIC STREPTOCCIC SEPTICEMIA WITH SOME UNUSUAL CLINICAL MANIFESTATIONS.

By GEORGE E. W. HARDY, M. D.
Baltimore, Md.

Despite the fact that puerperal septicemia is not an unusual condition, certain somewhat rare clinical features associated with the present case render it worthy of record. Fortunately, quite a large number of these patients overcome their infection, whether it is the result of attempted abortion or not, but in almost every case there is a time of great anxiety for several days. This patient showed signs that from the onset would have justified a most serious prognosis; nevertheless, her general condition was so good that one was inclined to modify it and hope that she would eventually recover. As will be seen later, however, she finally succumbed.

The patient, Mrs. A. M., age 25 (Union Memorial Hospital) No. 24,479, was admitted on November 4, 1921, complaining of vaginal bleeding. She had been married five years, had had two children, aged two and four, respectively, and had had one miscarriage at the seventh month. The menstrual function had been normal, the last period having occurred in August, three months before admission. Four days before admission the patient had been seized with severe pain in the lower abdomen and had passed a good deal of blood with many clots from the vagina. There was no history of intra-uterine manipulation. On the following day there were fever, headache, and insomnia. On the day before admission she had a slight chill. During her stay of four days at home there was a constant slight flow of blood from the vagina. On admission the temperature was 102.7, pulse 136, respiration 20, blood pressure 108. 60, R.B.C. 4,190.000, W.B.C. 18,000, hemoglobin 70 per cent (Dare). The patient was a well nourished, well developed young white woman and did not seem very ill. The heart and lungs were clear. The breasts contained a small amount of colostrum. The abdomen was soft. The fundus of the uterus could be felt three finger-breadths above the symphysis and was movable. Pelvic examination showed the cervix to be soft and patent; the fundus approximately the size of a three months' pregnancy and firm; the adnexae were normal. There was no odor to the vaginal discharge. Diagnosis: Incomplete abortion.

On the evening of admission, as the bleeding had increased and become quite profuse, the placenta was removed by the digital method, no curette being employed. On account of the length of the uterus it was impossible to reach a small piece of placenta attached to the fundus, and this was allowed to remain. The uterine cavity was packed. The general condition improved. Twenty-four hours later, the bleeding again returned and the remaining portion of the placenta

was expelled spontaneously. The temperature the next morning was 105-F. On the third day after operation, the blood culture showed one or two colonies of hemolytic streptococci to the cubic centimeter. There was rather severe pain in the lower abdomen but no muscular rigidity.

On the fourth day the patient complained of sudden severe pain in the index and little fingers of the right hand. Ecchymoses were found beneath the nail of the right index finger and for three or four days the fingers were red and swollen. A series of mild attacks of epistaxis that lasted three days also began at that time. The ecchymotic area on the index finger was under and at the root of the nail and suggested somewhat a paronychia, the suggestion being strengthened by the appearance of small pustules over the face, chest and back. On the fifth day there was a definite spreading of the ecchymoses; the ends of the fingers became livid and pulseless, and the patient complained of tingling and numbness in the fingers. It was then noticed that the left radial artery was entirely pulseless, although the pulse could be felt just above the elbow and in the superficial volar artery. Two days later definite cyanosis developed in the second and fifth fingers of the right hand and several ecchymotic areas appeared on the palmar surface of the middle and distal phalanges of the same hand. All of these areas persisted until death and grew darker in color. The distal phalanx of the little finger shriveled to one half its normal size in that time and presented a typical picture of dry gangrene.

On the eighth day, several large bullae were noticed on the right heel. These were aspirated and a hemolytic streptococcus was grown from the fluid obtained identical with that isolated from the blood. Five cubic centimeters of serum from a man who had been immunized against a hemolytic streptococcus were administered subcutaneously that same day. Two days afterward, she was given 12 cc. of serum from a woman who had had a somewhat similar puerperal infection five years before. Administration of these sera produced no reaction but did no apparent good; the patient became weaker and irrational at times and in spite of stimulation she died on the fourteenth day after operation.

Summary

The interesting features in this case of puerperal septicemia were as follows:

(1) The absence of chills except for one very slight one on the day previous to admission. As is well known, frequent chills occuring as often as once a day are a common characteristic of this disease.

(2) The endarteritis obliterans followed by dry gangrene.

(3) The severity of the infection but the relatively good general condition of the patient for the first ten days.

(4) The eruption of the bullae which remained unbroken and from which a hemolytic streptococcus was isolated, identical with that obtained from the blood.

(5) The use of serum from a convalescent from puerperal fever and from a man immunized against a hemolytic streptococcus.

(6) The apparent innocuousness of the serum injections and the possibility that they might have

done some good had they been used earlier in the disease.

SYPHILIS OF THE CENTRAL NERVOUS SYSTEM

READ BEFORE WEST VIRGINIA MEDICAL ASSOCIATION, FIFTY-FOURTH ANNUAL SESSION, CHARLESTON, W. VA., MAY 24, 1921.

By DR. D. A. MacGREGOR, Wheeling, West Virginia.

Cases of syphilis of the central nervous system naturally fall into two general classes. There are the perfectly obvious cases in which the diagnosis can be made by the shoemaker, and on the other hand there are those extremely difficult cases to diagnose in which syphilis of the central nervous system is suspected, but doubtful. We need spend no time discussing the diagnosis of the obvious cases in which the Argyll-Robertson pupil, the steppage-gait and the absence of patellar reflexes or the presence of mental symptoms such as the delusions of grandeur stamp the patient at once as a syphilitic of the tabetic or paretic type.

It will be well for us to consider the suspected, but doubtful, cases of syphilis of the central nervous system in two different groups—the acute and the chronic. When a patient presents himself in the primary stage of syphilis the average physician does not stop to investigate whether or not the central nervous system is involved. The patient presents an initial chancre, or a secondary rash, and the physician thinks only of the immediate relief of the present symptoms. The patient is delighted when the chancre and the rash and the mucous patches disappear soon after the administration of his first doses of mercury or arsphenamin or both. This treatment is good as far as it goes, but in the light of later developments in the study of syphilis it is apparent that the central nervous system is involved during the primary stage in a large percentage of cases.

There has been some question in the minds of students in regard to the time at which a syphilitic ulcer changes from a merely local lesion into a generalized disease of the entire body. It is obvious that by the time a roseloar rash appears that the blood and lymph have conveyed the poison to all parts of the body. It is reasonable to assume that the meninges of the brain and spinal cord share in this process and that at the time of the generalized eruption of the skin there is a corresponding inflammatory reaction in the central nervous system. This may be a very transient involvement, subsiding as the other secondary symptoms subside, or it may be in some cases the beginning of permanent involvement of the nervous system.

In 1922 Wechselmann 1 called attention to the involvement of the nervous system during the primary stage of syphilis, and recently a very excellent study of the same problem has been made by Udo J. Wile 2 in the University of Michigan Medical School. His study was based upon 221 cases of syphilis in which only the primary sore was present. In 49 cases out of the 221 examined routinely, evidence was shown of involvement of the nervous system with definite deviations from the normal in the spinal fluid before a secondary rash appeared on the skin. Dr. Wile regards as a devia-

tion from the normal, (1) any increase in the globulin and albumin content of the fluid, (2) any marked increase in the cell count, or (3) a positive Wassermann test. In my own opinion the presence of an increased amount of globulin and albumin is not of as great significance as an increased cell count or the presence of a positive Wassermann. In Dr. Wile's series, 12 of the 221 cases showed an increased cell count and 8 a positive Wassermann.

While Dr. Wile's deductions may be slightly liberal, it is apparent from this and other studies that the central nervous system is very frequently involved early in the course of the disease—in the pre-roseolar stage—at the time of the first period of generalization. Since we have evidence to show that it occurs in a certain percentage of cases, we naturally inquire why it does not always occur. This may be due to the fact that different strains of spirochaetes have affinities for different parts of the body. From animal experimentation as well as clinical evidence it may be assumed that there is a definite neurotropic strain of the spirochaeta pallida. We have no way of differentiating between chancres produced by spirochaetes of different varieties, and consequently we have no means of ascertaining in advance which particular patient will likely develop syphilis of the nervous system. Our duty is, therefore, obvious. Every syphilitic should have at least two examinations of the spinal fluid made. One examination should be made very early in the course of the disease; preferably after he has had one or two injections of arsphenamin. Another examination should be made before the patient is discharged as cured.

You will note that the first examination of the spinal fluid is suggested after some treatment has been administered. We have clinical evidence 3 to show that the spinal fluid is more apt to show evidence of deviation from the normal after the formation of antitoxin has been stimulated in the patient by the injection of arsphenamin. An examination of the spinal fluid at that time is more likely to give us reliable evidence of involvement of the nervous system. This phenomenon is a modified Herxheimer reaction, and is recognized as a distinct aid in the diagnosis of this disease. In chronic cases where the spinal fluid Wassermann is negative or doubtful, small doses of arsphenamized serum have been introduced into the spinal canal with the idea of increasing the positivity of the Wassermann reaction. The reaction is probably due to an inflammatory change caused by the liberated toxins from the destroyed spirochaeta pallida.

Up to this point we have been speaking about the early involvement of the central nervous system in the acute cases of syphilis. The other cases to which I call your attention are of the chronic variety in which there is some question as to whether or not syphilis is the cause of certain neurological symptoms. Dr. J. E. Moore 4 of Johns Hopkins Hospital calls attention to three minor signs which suggest very strongly the presence of syphilis of the nervous system in this class of cases. They are:

1. A persistently positive blood Wassermann reaction.

2. Minor pupillary abnormalities without other neurological signs.

3. Certain symptoms of which the patient complains, such as headache, nervousness, lassitude, rheumatism or vague generalized neuralgic pains usually worse at night.

I regard the first two points as very important, but unfortunately one cannot place very much dependence upon the general complaints enumerated under No. 3. On the other hand I believe that most information is to be obtanied from a thorough and complete physical examination of the patient. It is not sufficient to look for the Argyll-Robertson pupil; to try the patient's knee jerks and find out whether or not he can stand without wobbling with his eyes shut. That is the extent of the neurological examination practiced by the average physician —if indeed he goes that far. In order to make the right kind of an examination the patient must be stripped. He must be examined from head to toe for any abnormality in the motor or sensory apparatus. A painstaking examination must be made of the pupils and ocular movements, as any deviation from the normal is of significance. Sensations should be investigated in reference to the perception of light touch, pain, vibration, heat and cold. All of the reflexes should be tried out. The author has on more than one occasion found that the absence of the Achilles tendon reflexes gave the clue to involvement of the nervous system when the knee jerks and sensory phenomena were not notably altered.

In the diagnosis of this condition a painstaking history is just as important as anything else. You are all familiar with instances in which syphilitic disease of the nervous system was responsible for headaches as migraine; gastric crises diagnosed as obstruction of the bowel or malignancy of the stomach; shooting pains of the feet, ankles and legs diagnosed as fallen arches, rheumatism or sciatica. A careful history will often help us to avoid such blunders.

The diagnosis of syphilis of the central nervous system is difficult enough to tax all of our resources, but what are we going to do about the matter of treatment when we have made a diagnosis? This has been variously answered by different clinicians. The most conservative men maintain that a thorough saturation of the patient with the routine arsphenamin, mercury and potassium iodid will do as much for syphilis of the central nervous system as can be done. I feel that there is no doubt that a large percentage of cases have been adequately treated in this way and I have the utmost regard for the clinician who has established for himself and patient a definite plan of conservative treatment to which he adheres until he has obtained what he considers the best possible results. However, there are many cases of syphilitic disease of the nervous system which apparently do not respond to the routine medication and in a disease with such dire possibilities as this, it is justifiable to make use of any measure for the treatment which gives a reasonable promise of success.

In view of the fact that many cases were refractory to ordinary method of treatment, it was proposed by Swift and Ellis to introduce directly into the spinal canal, serum taken from the patient a short time after the administration of arsphemamin, intravenously. This

was undertaken because it was discovered that after an injection of arsphenamin very little evidence of the presence of the drug could be found in the spinal fluid. The choroid plexus from which the cerebro spinal fluid is largely secreted apparently acts as a barrier against the introduction of foreign chemicals from the blood stream into the spinal fluid. By injecting the arsphenamized blood serum directly into the spinal canal, Swift and Ellis attempted to short-circuit the choroid plexus and thereby hoped to obtain better results in the treatment of syphilis of the central nervous system. In a very large measure their plan of treatment has met with success. It is not uniformly successful, but in many instances it has produced results which far excel anything that could have been expected from routine medication.

In some clinics the Swift-Ellis method is used practically as they introduced it, but there have been many modifications practiced in other clinics. Certain investigators have seen fit to introduce a small quantity of arsphenamin or neoarsphenamin directly into the spinal canal. The arsphenamin has been dissolved in normal salt solution, in cerebro spinal fluid and in normal blood serum, according to different techniques worked out by different men. Great care must be taken in introducing arsphenamin directly into the spinal canal inasmuch as large doses are extremely irritating and produce dire results. The usual dose is 1-3 of a milligram diluted to 10 or 20 c.c.

It has been suggested by different men that the good results of intraspinal therapy are not to be ascribed to the amount of drug introduced but rather to the withdrawal of the cerebro spinal fluid and the consequent irritation of the meninges which promotes a better dissemination of the medicine circulating in the blood. With this idea in mind, Gilpin and Early 5 of Philadelphia have conducted a series of cases in which they practiced simple drainage of the spinal canal at weekly intervals during the progress of intensive treatment with arsphenamin and mercury. From their clinic very good reports from this form of treatment have been given out, but their findings have not been substantiated by other investigators. In a recent criticism of this method, Dr. John H. Stokes 6 of the Mayo Foundation maintains that in his hands spinal drainage has not proven any more satisfactory than routine treatment with arsphenamin and mercury without drainage.

The method of spinal drainage without the elaborate Swift and Ellis technique would be a very simple proceedure, and a method which we would most willingly adopt if we were convinced that its results were fully as good as those to be obtained from the Swift and Ellis method or one of its modifications. To that end we have been trying out the drainage plan on certain cases on the free service in the Ohio Valley General Hospital at Wheeling, W. Va., but as yet we are not able to say that the results obtained are any more striking than those we might have obtained from the routine administration of arsphenamin and mercury without drainage.

We have had, in the past, considerable experience in treatment by the original Swift and Ellis method and on the whole, results have been

fairly satisfactory in the tabetic cases. Little or nothing has been expected or obtained in paresis or taboparesis. We have had the satisfaction of having a tabetic who was absolutely down and out physically and abjectly despondent, returned to his former occupation, maintaining himself and his family on his usual social scale and absolutely free from the excruciating, lightning pains which had annoyed him for years. We have seen cases in which the control of the bladder had been practically lost, returned almost to normal. We have also seen cases in which the first two or three treatments did not produce any spectacular results, who lost heart and failed to continue any form of treatment. We have also seen two cases in which the results were disastrous, both of these cases being far advanced. One of them was tabes and the other paresis. Both of them developed a paraplegia early in the course of the treatment; later on tropic ulceration developed followed by death a few months later.

Adequate treatment for the private patient of moderate means is a most difficult thing to obtain. Many of these patients are in the dependent class when they are first seen and are eligible, therefore, to the best that can be obtained in the way of free treatment in our modern, well-endowed hospitals. In a patient is able, financially, to follow out a complete course of modern treatment for syphilis involving the central nervous system, he is fortunate indeed. Our most disappointing cases are those which start out with good intentions as private patients and decide to discontinue treatment because the expense is heavy and the results are slow. When a patient is able and willing to submit to a complete course of treatment it is well to have in mind an ideal method of procedure. One cannot expect results by administering this or that form of therapy at irregular intervals. There must be a definite and comprehensive system to follow.

Dr. John A. Kolmer (7) of Philadelphia, has outlined a plan of treatment which in my opinion is most promising since it embodies the good points of the Swift and Ellis method, the spinal drainage method, and also the technique of Ogilvie, who adds arsphenamin directly to the serum which is injected into the spinal canal. In my opinion it is the best method as yet suggested. It was published in the Journal of American Medical Association, March 20, 1920, and in the author's own words is given as follows:

"1. A 'course' of treatment covers four weeks; during this period twenty-four inunctions of mercury 360 grains of potassium iodid and four combined intravenous and subdural injections of arsphenamin are given, followed by an intermission. Treatment begins with daily inunctions of mercury for one week and the oral admission of five grains of potassium iodid three times a day. At the end of this week the first intravenous and subdural injections of arsphenamin are given, and they are repeated at intervals of a week until four have been administered. Mercurial inunctions and potassium iodid are given throughout, excepting on the days when arsphenamin is administered. The urine is examined at least once a week for evidences of renal irritation. If in-

tolerance to mercury or iodid or both develops, the doses are reduced or the administrations are given every other day.

"2. On the day when the intravenous and subdural injections of arsphenamin are given, the patient is put to bed at noon and lunch is omitted; light supper is generally permitted, and additional refreshment is given at 9 p. m. if food is desired. If the patient is constipated a mild cathartic is given the day before to insure an evaculation of the bowels during the morning hours.

"3. Six-tenths gm. of arsphenamin is dissolved in 150 cc. of sterile physiologic sodium chlorid solution prepared of freshly distilled water and a 15 per cent solution of sodium hydroxid is added until the solution is just completely cleared, the amount of alkali being measured as drops or one-tenth cubic centimeters; after complete neutralization (clearing) three or four drops more of the alkali are added to the solution. Sterile saline solution is now added to bring to total volume to exactly 200 c.c.; each cubic centimeter of the solution contains, therefore, 0,0003 gm. of arsphenamin, and 1 c.c. is removed to a sterile test tube to be used about one hour later in dose of 0.1 c.c. (0.0003 gm.) for arsphenamizing the serum in vitro.

"4. The solution of arsphenamin is now administered by intravenous injection, the dose being approximately 0.6 gm., well diluted.

"5. Immediately after the intravenous injection, 25 c.c. of blood are removed from a vein of the opposite arm with a sterile record or Luer syringe and expelled into a sterile 50 c.c. centrifuge tube. The tube has a narrow neck facilitating the use of a sterile rubber stopper and carries 4 c.c. of a sterile 10 per cent solution of sodium citrate in physiologic sodium chlorid solution to prevent coagulation of the blood.

"6. The blood is at once gently mixed with the citrate to prevent coagulation and immediately centrifuged at high speed for at least twenty minutes, 10 or 12 c.c. of the clear plasma being pipetted aseptically to a sterile test tube. Sodium citrate may be omitted and the coagulum of blood gently broken up with a sterile glass rod before centrifuging, but from ten to fifteen minutes are required for coagulation before breaking up the clot, and the resulting serum is usually tinged with hemoglobin; the latter, however, is not harmful.

"7. One-tenth c.c. of the solution of arsphenamin held in readiness is now added to the plasma or serum and thoroughly mixed; the dose is 0,0003 gm. (1-3 mg.) which is safe for the first injection. Subsequently the dose may be increased to 0.2 c.c. (0.0006 gm.) and occasionally to 0.3 c.c. (0.0009 gm.)

"8. The arsphemanized serum is placed in a water bath at 56 C. 132.8 F.) for thirty minutes.

"9. Spinal puncture is now performed in an aseptic manner in the lateral posture with a gauge No. 19 Babcock needle; the diameter of this needle is about 1 mm., which insures a slow rather than rapid flow of spinal fluid and consequently a gradual drop in cerebrospinal fluid pressure, and the needle fits the record syringe. Preliminary to puncture in the third or fourth lumbar interspace, the skin and subcutaneous tissues are infiltrated with about 1 c.c. of sterile 1 per cent.

procain by means of a No. 26 needle which renders spinal puncture almost painless. Spinal fluid is allowed to flow until about 30 c.c. are secured; at this time the flow is usually quite slow, many seconds being required for the formation of a single drop. The warm arsphenamized serum (usually from 10 to 12 c.c.) is now slowly injected by gravity or with a record syringe. As a general rule the slow injection of 12 c.c. of serum under these conditions is almost painless.

"10. The foot of the bed is elevated and the patient requested to lie on his back for several hours and to stay in bed until the following day.

The time required for the operative procedures is about two hours, thus distributed.

(a) About thirty minutes for the intravenous injection of arsphenamin and the withdrawal of blood.

(b) About one-half hour to conduct spinal puncture, drain the canal, and inject the arsphenamin serum.

(c) About one hour to secure and arsphenamize the serum.

The 1 c.c. of solution of arsphenamin carried over in a sterile test tube for arsphenamizing the serum may be used for this purpose with safety any time within three hours of its preparation."

You will note in this method that the arsphenamized serum is injected into the spinal canal according to the Swift and Ellis technique, and that dilute arsphenamin is added to the serum in vitro according to the Ogilvie technique and that the spinal canal is drained according to the Gilpin and Early technique. The quantity of serum introduced is about one-third of the volume of the spinal fluid withdrawn, so that there remains a negative pressure in the canal, which theoretically would tend to promote secretion from the blood vessels into the sub-arachnoid space. I think that this is an ideal course of treatment based upon our present day knowledge. It will probably be changed a great deal by subsequent studies, but it is a good practical plan for us to follow now.

These courses should be continued until the patient is well, symptomatically and serologically. We cannot expect definite benefit in all of the cases. In fact, from a rather careful review of the experiences of different men in this field, I am inclined to think that if 30 per cent of the cases are definitely benefitted we can be very well pleased with results.

Dr. O. J. Rader (8) of the Massachusetts Commission on Mental diseases thinks that a complete recovery, mental, physical and laboratory, after less than five or ten years, or even before death, may be questioned. This is perhaps true, but nevertheless we have achieved a good measure of success if our patient is returned to society as a self-supporting, productive unit instead of a dependent liability on the community. When one speaks of a complete recovery, mental, physical and laboratory, he refers to the well nigh impossible. Granting that a man may be returned to normal so far as laboratory tests of the blood and spinal fluid are concerned, and so far as physical fitness may be estimated, the very fact that that he has had this grave experience means that there is an ineradicable scar left on the spirit. He will never be able to get away from the

though that his mind and body have suffered a lasting contamination and impairment.

However, we should never allow considerations such as these to deter us from advising or giving each and every case the most thorough and intensive treatment available. Without treatment their future is a dreary prospect of progressive degeneration, physical and mental. With intensive treatment a certain per cent (possibly 30 per cent) can be definitely benefited and the progress of the degeneration arrested —so that they may do their part, if only a limited one, in the world's work. A few of the 30 per cent will be cured to the extent that they can maintain their accustomed station in life and gradually improve themselves. Let us, therefore, use the measures that we now have at hand as vigorously as possible, and look forward to the day when the achievements of medical science will make a real cure possible in all these cases.

Discussion by Drs. Bloss, McDonald, Vest, Tom Williams, and Farnsworth.

Note 1 Wechselmann, W. Deutsch Med. Wchschr. 38:1446-1912.

Note 2 Wile, U. J.—J. A. M. A. 76:8 Jan. 1, 1921. J. A. M. A. 64:679 Mar. 20, 1915.

Note 3 Scott and Pearson—Am. Jour. Syph. 4:201 Cerebro-spinal Syphilis.

Note 4 J. E. Moore. J. A. M. A., 76:769. Cerebro spinal fluid in Treated Syphilis.

5. Gilpin and Barley, J.A.M.A. 66:260, 1916, "Drainage of Cerebro Spinal Fluid, etc."

6. Stokes, J.A.M.A., 76 708, "Relative Effectiveness of Various Forms or Treatments, etc."

7. J. A. Kolmar, J.A.M.A. 74:794, "Method of Treatment for Neurosyphilis."

8. Rader, O. J. Am. Jour. of Insanity, 76:449. "Neurosyphilis Investigation, etc."

WHAT ARE YOU GOING TO DO ABOUT IT?

(With Apologies to Nobody)

DR. EDWARD S. HAMILTON, Oak Hill, West Virginia

Read before the Fayette County Medical Society at Oak Hill, W. Va., Feb. 14, 1922.

From the above heading you members will no doubt think this a peculiar subject to present to a Medical Society, but when you consider the obtainable reports during the year of 1919 the average income of all physicians within the United States was only $1,200.00 per capita, I assure you that it is high time that something is done. The average income of the laborer was in advance of $600.00 during the same year. Deduct from the physicians income the absolute expense such as horse, automobile, office rent, instruments, appliances, books, dues in the various societies, and see what he has for sustenance of himself and family, and providing for that Rainy Day. However, I 'am glad to say that professional fees have been raised during the past two years, but not in proportion to other things necessary. During the past three months I have repeatedly had said to me—"Since other things are coming down, I presume that doctoring will fall too." Gentlemen, I am free to state that here is one who will not charge less for services. Who, in the past has been the cause of the underpaid, the never paid, and the deferred paid doctor? We are the cause.

When you stop to think that a contractor and builder, a laborer, a taxi driver, etc., always ask whether you are able to pay, and when you will pay, why should we not use the same method. Further, they expect the doctor to always pay his debts, be neat and tidy, answer promptly to all commands for money toward the church, civic improvements, etc., and they pay their bill when they are ready, and if perchance you really need the money and ask for it, many times they become indignant. Further, many physicians are afraid to send statements, present a man face to face with his account and ask payment for fear that he will become the patient of another physician. Personally, I do not care for that family practice. I am perfectly willing to put out for service and furnish drugs to the needy, but when a man can pay and don't pay—he should be made pay his bill.

There are many things which cut into the income of physicians as, Free Clinics—which not only treat the poor but the rich, and at the same price. The professors, assistants and instructors are eager to show their skill in particular specialties and often fail to appreciate the fact that some honest hard-working physician is deprived of his fee by reason of dispensary abuse. Isolation Hospitals within the larger and many small cities have been established for Diphtheria, Scarlet Fever, Small Pox, etc. These diseases are becoming only vague technical terms in the minds of many city physicians who have little chance of studying such ailments. The Health Commissioner makes the diagnosis, removes the case, placards the house, signs a release or issues a death certificate. No one is permitted to dispute the diagnosis, and the general practitioner is thus deprived of work and opportunities for study of the infectious diseases, and of course he loses a source of income. In many cities you will find the so-called Maternity hospital which have been established by, usually wealthy physicians—who do not depend upon their practice for their living, and wealthy members of the laity, and these hospitals are maintained chiefly by public donations. Their purpose being primarily charity and benevolence; yet from personal knowledge I can state that I have known several women who were financially able to pay for skilled care to be delivered free of charge. Obstetrical cases are not commonly emergency in nature as, the head of the household has nine months to prepare for the occasion; yet these are often taken without discrimination. Thus, many families are needlessly pauperized and the general practitioner is cut off from a legitimate field of practice. Further, the art and science of obstetrics is debauched by ignorant mid-wives who are glad to attend them for a fee from three to five dollars, thus, the fee of the obstetritian is lowered to the most degrading level. Social Workers, Visiting Nurses, etc., are gradually invading the field of medicine and are teaching the public hygiene and preventive medicine. This, the physician is always ready and willing to teach if given a chance, but the polititians have favors to hand the laity, thus another invasion into the land of income of the physician. The various cults have invaded the field of medicine and to no small degree.

Indeed, it would be hard to esti-

mate the amount of damage these cults are inflicting upon the public. Many lives are jeopardized or sacrificed upon the altar of ignorance and superstition. Yet, the public is generously supporting these things at the expense of health, medical art and science. I have personally known one woman since my residence in Oak kHill, suffering of Pulmonary T. B., with cavity formation to have her spine adjusted and die of hemorrage before his treatments were complete. He had promised that within a very short while she would be doing her house-work. She is, but not here in Oak Hill, but in that home not made with hands, but eternal in the Heavens. My own dear mother, a Diabetic for several years, was a victim of a cult. Following the advice of neighbors and friends and not the advice of her own son and medical advisors, she attempted exercises given by some faker and quickly died of a Cerebral hemorrage. Thus, you can plainly see that the medical profession is completely surrounded and menanced from all sides by the various fakers, charlatans, and pretendors—legally equipped with private and public funds. They are gradually destroying the honor as well as the very means of existence of the physician. Every human being must live, and it is very true that self preservation is the first law of nature. Hence, we find many medical men of lowered income stoop to things unethical, unprofessional, and even criminal.

Physicians in general are victims of the crooks which we find chasing around all over the country these days. Let one land in any of the small towns within the country and they invariably look up the physician. He is the man who will usually bite at oil stock down in Texas, take books not sold—just presented, and buy an up to the minute account system that will collect debts from a man that the devil could not make pay his honest debts. Physicians in general have devoted lives to the relief of suffering humanity and are searching in general for anything new or old that will give relief for their patients, and are leaving that one thing of personal importance undone-business in their practice.

Most of the physicians in Fayette County are contract physicians and receive their fee through the office, thus they are saved the worry and expense of collections. I assure you that that is quite an item. The physician doing general practice in any small town or large one for that matter, has a job when it comes to collecting his accounts, and if he does not have that amount of business necessary, his accounts at the garage, grocery store and the preacher's salary will remain unpaid. That disease known as "Financial Cramps" is no respector of persons; that frequent applications of kind words and good wishes are easy to take, they do not in any way relieve those griping sensations of a run-down monetary system, and that while all flesh is grass, it takes real Uncle Sam's money to buy gasoline and prunes. The will to pay is hereditary, just as red hair and buck teeth. It is a common fallacy that a man pays his debts because he has money. That is not necessarily true. On the one hand is your friend with abundance of money, who can not be threatened, beaten or gassed into paying the most ordi-

nary debt. On the other hand, the poor fellow without a visible dollar —you know him—who is Johnny on the invoice. Money has little to do with either case. It is the breed of the man. The man who pays the doctor is the man who thinks in advance. He never flashes a roll; he does not drive a car and carry a mortgage at the same time. He don't hang up the grocery or the butcher for food that he can not afford to eat. He never lights the fire without wondering where the coal man gets off. He never throws the Bull nor pitches the Bluff, nor gives notes, nor writes checks dated tomorrow, but when Pay-Day comes, he is there with the coin of the realm. At times he feels sore at the rest of us as, he cannot see where he gets along any better than the man who skins as he goes. Still he goes on and on, and pays and pays, because it is his breed. Doctors think a lot of this breed, because, it is this breed that is the bulwark of society, the main-spring of commerce, and the balance wheel of civilization.

We all get a little blue at times. The things that favor this condition are all too frequent in the physicians life. He is continually brought in contact with pain and suffering. He knows the secrets of the family and is the one who often has to listen to their tale of woe. We must not allow our hearts to be shadowed by these things. It is the worst thing that can happen to any doctor to be of a blue disposition; and, especially, to allow his blueness to color his relations with his patients. Bury your troubles. I don't want to hear them, and the other fellow don't either. "A hearty laugh doeth good like a medicine" PROVERBS. It Do. It sweeps the cobwebs out of your brain. It takes the load off your chest. It drives away the blues. It lets the air out of your overdistended tires, and the car rides easier. It clears out the carbon and grinds the valves. It takes the rattle out of your top and oils the springs. It quiets your timing gears and shows "charge" on your ammeter. It oils the fan and cools the engine. It puts ether in your gasoline and "pep" in the motor. It cleans the windshield, polishes the lamps, and shines the body. It throws a bright gleam before you. It mends the leaky top. It invites good company. It makes the going good and speed legal, 'n'everything. It puts joy in life and revives the fainting, depressed spirit—Let's Go.

Owing to the fact that this is the first meeting during the new Year 1922, let us all resolve that we will inject more business into the practice of ours—the most noble of all professions—the practice of medicine, and that by so doing we will not only do the general public a real good, but that when the time comes, which it surely will, we will not have to ride ten miles into the country through the mud to move a ladies bowels simply because we need the money. And as Crosshooks as aptly applied the Golden Rule as follows:

Old Father time is coming;
He is surely on his way.
You might think that you are cunning,
But he'll get you yet some day.

Your years are piling higher
As along life's road you go,
The old boy is getting slyer
As your legs are getting slow.

He comes right up behind you,
With his scythe so keen and bright,
And when you least expect it
He slams you left and right.

So there is no use complaining;
Just stand up like a man.
You might think that he can't get you,
But believe me, kid, he can.

Our days on earh are limited,
And we are living mighty fast;
So let's have a bright tomorrow
And forget the old dark past.

Then vow to live a life better
And be always kind and true
And always do to others
As you'd have others do to you.

THE MANAGEMENT OF NEPHRITIS

By WILLIAM A. JENKINS, M.D.
Louisville, Ky.

Read before the Cabell County Medical Society.

To avoid confusion, misunderstanding, or arguments, I shall assume that we all accept from a broad clinical standpoint, the practical and common sense division of all Nephritis into Acute and Chronic types. The management of Nephritis, according to the above classification would naturally then be divided into the "Management of Acute Nephritis" and the "Management of Chronic Nephritis."

First: "The Management of Acute Nephritis." The preparatory or primary requisites which should form the ground work of any kind of treatment are Warmth, Quiet, and Rest. These things are perhaps more important than medicine. The body should be kept comfortably warm at all times, chilling or chilliness is a sensation that a patient with acute nephritis should never be allowed to experience, if it is possible to prevent it. Rest and quiet are also necessary, the patient may express a desire to sit up most of the time, stating that he is not sick enough to go to bed, he wants to walk around, read and take part in everything that is going on in the house. Any patient with acute nephritis should be put to bed in a light, well-ventilated, but not too airy room, he should be covered warmly and kept quiet throughout the course of the disease.

The next important factor is undoubtedly that of diet. It goes without saying that the diet should be bland, nutritious and easily digested. In the severe cases liquids only should be allowed. In the less severe cases liquids plus appropriate semi-solids are in order. Good clean milk (sweet or buttermilk) makes a most typical food, if it can be obtained and the patient has no idiosyncrasy to it. It is in most cases very easily digested and in addition it contains the elements necessary to growth and nutrition. Milk can usually be taken over longer periods of time with greater satisfaction and less discomfort to the patient than any other single type of food. In addition, it lends itself readily to many and diverse combinations. Farinaceous foods would perhaps take second place in the list of desirable materials, e.g. rice and the various cereals cooked in a double boiler until the grains have almost disintegrated, (gruels in fact). They should be eaten with sugar and cream. Solid animal food should be avoided, broths however, may be allowed in certain instances, e.g. chicken, beef, or clam broth. Animal broths should always be prepared with care, being particular to see that all fat is skimmed off. We should remember that nitrogen and nitrogen

split products are hard for a crippled kidney to handle, therefore cut the protein food elements down to a minimum. I know that we have all noted the tendency for nausea and sometimes even vomiting to appear in these cases. This is an added reason for using caution in the selection of the diet. Milk stands us in good stead here. If it is necessary we can add an alkali, e.g. lime water, bicarbonate of soda, vichy, or plain carbonated water. Fruit juices add variety and do no harm, e.g., orange or grapefruit juice and lemonade. Custards, gelatine, ice cream and malted milk may be occasionally used to vary the diet. In the less severe cases, or in convalescence, milk toast, baked apples, and stewed fruits with cream are allowable; gradually broadening the plan with the improvement of the case, until your patient is taking the full diet of the table as he approaches the normal standard of health.

Next in regular order would come the use of medicines; our object being to use every means in our power to relieve congestion of the kidneys and blood stasis everywhere, to remove toxines by every available route, to clean out and keep clean the intestinal tract, to protect the skin and enable it to function normally, to maintain the normal alkali reserve of the blood plasma, to stimulate the kidneys judiciously, and by all of these procedures get the kidneys back on a normal functional basis again.

Our first thought would be to begin with the gastro-intestinal tract (purgation). We generally have some nausea and perhaps vomiting (evidence of irritation), there may be abdominal pain. We are sure that we have fermentative and decompositional changes going on in the intestinal tract; therefore clean it out and keep it as clean as possible. For this purpose there is nothing better than calomel and soda followed by a saline. Salines have a particularly happy action in this condition, they reverse the osmotic current, and thus draw a lot of muddy serum into the tract and allow it to be carried off. By this means drainage is started and the first step toward the relief of the kidney congestion is taken. The procedure will likewise facilitate the action of your other remedies. A daily dose of your saline should be given; if this is too active, then every second or third day, according to the needs of the case. Purified sulphate of magnesia is perhaps best, a little fresh lemon juice may be added to each dose, or you may use the effervescing citrate of magnesia; bitartrate of potassium and milk of magnesia will often times act very nicely in children.

Our next point of attack would be by the use of diuretics; especially if we have dropsy and scanty urine. The kind and type of diuretics to be used would be decided by the severity of the case and the character of the symptoms. In the milder cases sweet spirits of nitre and the salts of potassium are very useful, (the acetate or the citrate). A good formula for a child would be as follows: Rx. Potassii Acetatis, drams 2; Spirits Aetheris Nitrosi, drams 2; Liquor Amonii Acetatis q.s. ad. to make three ounces; Sig., a teaspoonful in water every three or four hours, for a child under ten years of age. If the case is severe or if it does not respond quickly to the above, a reliable

preparation of Digitalis should be administered up to effect. This is one of our best drugs. Many clinicians prefer a freshly prepared infusion, while others use some of the newer preparations properly assayed, physiologically tested and time limited, containing the active principle of the Foxglove. The potassium salts may be given in combination with the Digitalis. Theocin and Theobromin-Sodium-salicylate are often useful in selected cases. If suppression is near and your efforts along the above lines have not been successful give Fisher's solution by proctoclysis or intravenously, and at the same time use hot applications or cupping over the region of the kidneys, posteriorly.

Third: Diaphoretics, or the utilization of the skin as a route of elimination. In the great majority of our cases, the use of diaphoretic drugs is not necessary. In the average case all that we expect of the skin is that it shall do its natural normal work. We assist in this respect by keeping the body warm and avoid chilling.

If Uraemia or suppression threaten, or are actually present, hot baths or hot packs are very efficacious. Great care should be taken to insure that the packs do not remain on too long and get cold. Jaborandi Fl. Ext. drops 10 to 20 at four hour intervals by mouth, or its alkaloid Pilocarpine Hydrochloride grains 1-6 to 1-4 by hypo every four hours for an adult. The use of this drug is not without danger. It should not be used in states of extreme weakness, where pulmonary oedema exists or where the heart is very weak. It should never be used without the direct supervision of the attending physician; its physiologic effect should be closely watched, if untoward symptoms arise the drug should be dropped.

Fourth: The use of counter irritation over the region of the kidneys. Measures which fail under this head occupy a very minor place in the management of nephritis. In the opinion of many good men such procedures are of doubtful value. If beneficial at all they would most likely be of assistance where Anuria is a menace. In such cases hot local packs, dry heat and cupping, wet or dry, are methods often utilized.

In addition to keeping close track on all symptoms, the physician should interrogate the urine almost daily. Occasionally a blood chemistry report would be helpful (providing good laboratory facilities were easily available). The proper care and watchfulness during the progress of the acute infection which causes the nephritis and the scientific supervision of the convalescence from said infection will in many instances prevent the occurrence of nephritis.

The Management of Chronic Nephritis

All acute manifestations, attacks and symptoms whatsoever, which arise during the progress of a chronic nephritis are to be managed according to the principles laid down under the discussion of acute nephritis. We need say nothing further concerning them here. We shall now turn our attention to the essentially Chronic Type:

It makes little difference as to names, whether we say "Chronic Interstitial Nephritis," "Cardio-

Vascular Nephritis," "Chronic Glomerulo Nephritis" or what not. It is only essential for us to remember that we are dealing with damaged kidneys and that said damage is essentially chronic in type and progressive in character. We are now ready to formulate general principles for treatment. Later our knowledge of the case may warrant our making tentative statements regarding the type and character of pathological changes going on in the various organs and structures involved.

We have no specifics in this condition, as a rule the damage is already beyond repair before the physician sees the case. As Osler has well said, "It is an incurable affection, and the anatomical conditions on which it depends are quite as much beyond the reach of medicine as is wrinkled skin or gray hairs." It is essentially and necessarily then a question of conservation or management. Tyson has very completely summarized the whole question of the management of this form of nephritis when he says, "That we are to direct our energies largely along three principle lines of endeavor; (1) Protect the patient from the consequences of his malady; (2) Maintain the integrity of the blood; (3) Meet the complications and symptoms as they arise."

First ascertain the exact condition of your patient when he presents himself for treatment. Begin this investigation with the kidneys. How much work can they perform? The urine may show considerable albumin and many casts and yet he may be able to eliminate nitrogen fairly well (he is able to concentrate, the specific gravity of the urine may be as high as 1020 or 1025). On the other hand the urine may show only an occasional trace of albumin and a cast or so now and then. Yet his urine is constantly of low specific gravity and light in color (he is unable to concentrate, he eliminates nitrogen poorly). The various functional kidney tests are useful here, the Phenol-Sulphon-Phthalein test (the red test, as it is commonly called); the Mosenthal test (the test for concentration); the blood chemistry as to the concentration of sugar, uric acid, urea, and creatinin in the blood; a comparison of the chemistry of the blood and the urine, and the inter-relationship which exists between them (the co-efficient of Ambard). Investigate his metabolism thoroughly, determine the condition of the digestive tract. Has he a poor digestion or an old infection of the gall bladder? Has he an old focal infection somewhere? e.g. teeth, sinuses, throat, lungs, prostate, etc. If so, clean it out if possible. Is his heart competent, or is the myocardium giving way? Is his blood pressure high, both systolic and diastolic measurements? Has he lost his vaso-motor response? All of these things should be determined within as narrow limits as may be. When all of these matters have been investigated you are in a position to plan out a dietetic, hygienic and medicinal schedule, suitable to your patient and his condition.

The general directions would be as follows: Your patient should lead a quiet, easy, regular life, work and exercise should be taken in moderation, always stopping short of exhaustion; plenty of rest and sleep are essential; the skin should

be protected in cold, changeable weather by the wearing of woolen or flannel underwear; the diet should contain only a minimum of nitrogen (125 grams in 24 hours). Take a good text book on dietetics and select a bland diet of fruits, cereals, and simple vegetables (paying particular attention to nitrogen percentages and calculate your calories, if you desire). The diet can usually be cut down considerably in bulk without harm to the patient. Milk and milk products are excellent. Alcohol in all forms is to be strictly forbidden. Keep the bowels open, the skin active, and the urine abundant. Iron, alkalies, laxatives, and the salts of potassium may be given in courses occasionally. A residence of a few weeks once or twice a year at some mineral springs is a good thing for your patient, if it is financially possible, if not have him buy the artificial salts and add the water at home, which is just as good. Simple bitter tonics and the salts of iron, or, even the old fashioned Basham's mixture may be used if the blood shows anaemia. Drastic measures to force the blood pressure down should not be used. A constantly high diastolic pressure is more significant of danger than a high systolic pressure. Often strict attention to the measures detailed above (e.g. change in diet and habits, rest, elimination, etc.) will in time bring the pressure down to a safe margin. Now, if in spite of the above, the pressure remains dangerously high, and in addition the patient suffers constantly with headache, vertigo, nose bleed, and dizziness you are justified in trying to lower the pressure by the use of drugs such as nitro-glycerin grains 1-100 to 1-50 every four hours; sodium nitrate, grains 1-2 every four hours; Tr. Aconite, drops 3 to 10 in water three times a day. Dr. Thompson of New York, is very fond of Aconite in this connection, in his book "Practice of Medicine," he mentions having used this remedy for several months continuously on the same patient. These remedies should not be used over too long a time even where they are successful, and if after a reasonable length of time they are not successful, there is all the more reason for stopping them as this is proof positive that the vaso-motor response is lost, in which case there can be no benefit derived from the use of this class of drugs. The iodides are of questionable value in this connection unless there is a syphilitic taint in the case.

"Meet the complications and symptoms as they arise." This phase of the subject, I feel, has already been given sufficient consideration. There are however, two accidents, or incidents, which if they appear, always fill us with fear and dread and make the outcome of the case uncertain. One or both of these can occur at any stage and in any type of the disease under discussion. They are Urinary Suppression (Anuria) and Uraemia. The treatment of Anuria has been pretty fairly covered under the various headings given above. I deem it well worth while however at this time to consider briefly the treatment of Acute Uraemia.

A physician is suddenly called to see an individual having violent, general convulsions at intervals, he is unconscious, breathing is stertorous, he is frothing at the mouth and perhaps his sphincters are act-

ing involuntarily. What picture could be more distressing, or more pregnant with possibilities of harm to the patient? In the proper management of this condition the skill, judgment, and therapeutic knowledge of the doctor is taxed to the utmost. Promptness is the plan, and elimination is the watchword. If marked and violent convulsions are present they must be controlled as promptly as possible because they are dangerous and threaten the life of the patient. Chloroform by inhalation during the height of the convulsion is by long odds the best possible drug. While morphine by hypo is certainly the best routine treatment to prevent the recurrence of convulsions (in spite of what may be said to the contrary about shutting up secretions, etc.) In this particular condition the morphine loosens the grasp of the perverted nervous system and thus facilitates the action of your purgatives, diuretics, et al. Catheteriz the patient right at the start, (and obtain a specimen of blood for a blood chemistry examination). Three to five drops of croton oil in fifteen drops of glycerin should be placed on the back of the tongue. As soon as the patient is quiet enough to permit it, place him in a hot pack. Keep up the packs at intervals until your patient seems to relax and quiet down a bit. If your subject is full blooded and plethoric, with a very high blood pressure, the skin dusky or slightly cyanotic, do not hesitate to bleed him early and promptly, with drawing anywhere from eight to twelve, or even sixteen ounces in extreme inounces, according to the needs of the case. If your packs after a reasonable time are not bringing results to suit you, use Pilocarpine Hydrochloride grains 1-6 or 1-4 by hypo in addition, and repeat at intervals if necessary for effect. Always remember that the effect of Pilocarpine must be watched closely. In favorable cases after twenty-four to forty-eight hours of above treatment the picture changes, fortunately for us, the convulsions are slight and occur only at long intervals, or they may have disappeared entirely. Consciousness has partially or completely returned. The bowels have moved freely and satisfactorily. The first phase of your treatment is ended. The patient is now given water, six to eight ounces by mouth, and nothing else, at two or three hour intervals. Hot water is to be preferred and to each drink is added 20 to 30 grains of bicarbonate of soda. Warm normal saline solution is now started by proctoclysis. This should be kept up at intervals until the kidneys are acting freely. Fischer's solution may be used instead of the normal saline according to the preference of the attending physician.

By this time your urine report from the catheterized specimen is ready, also your blood chemistry report. You have ascertained the condition of the heart and arteries, you are acquainted with the general systemic condition of your patient, and you are ready with the knowledge at hand to arrange your therapeutic program along the lines laid down above as suitable for the various types of nephritis.

As a fitting termination of this distinctly practical subject, we may lay down the following working rules or conclusions:

1. We have no specifics. It is therefore a question of manage-

management.

2. Slipshod methods are of no avail, you must keep accurate histories of your cases, watch the progression or retrogression of each element, factor, or symptom and be guided thereby.

3. To get the best results we must have the hearty and active co-operation of our patient. Take him into your confidence, tell him the whole story in a simple way. Give him to understand that without his help you can do little or nothing.

4. Adopt the plan of seeing these patients at regular intervals, say once a month at least, check up your records on him during these visits, urine analysis, blood pressure, condition of heart, condition of gastro-intestinal tract, presence or absence of headache, dizziness, dropsy, tec. Have a blood chemistry examination once or twice a year if indicated.

These matters are more important than medicine in managing chronic nephritis, and if you will use them as your guide in handling your cases they will surely enable you to add years to the life span of your patient, and comfort to his days.

NURSES NEEDED BY GOVERNMENT

The United States Civil Service Commission states that there is need for nurses in the hospitals of the United States Veterans' Bureau and the Public Health Service and at Indian schools and agencies. Applications will be received for these positions until further notice.

Applicants are not given a written examination, but are rated upon the subjects of physical ability, weighted at 10 per cent, and training and experience, weighted at 90 per cent. Applicants must have graduated from a recognized school for trained nurses requiring a residence of at least two years in a hospital giving thorough practical and theoretical training.

Full information concerning entrance requirements, salaries, etc., and application blanks, may be obtained by communicating with the United States Civil Service Commission, Washington, D. C., or the secretary of the civil service board at the post office or customhouse in any city.

When the state society was organized the written code of the A. M. A. was adopted and this was the beginning of an autocracy in medicine as we hear from time to time.

We have heard ever since the reorganization of the medical profession that we were in great danger of a medical autocracy—the greater the success of the organzation, the greater the danger. The same is true of the American College of Surgeons and the standardization of hospitals. The American idea has been in danger for nearly 150 years and yet we survive. We wonder sometimes, why the dangermongers dont become discouraged.

We realize with other interests that conditions are changing. The old men are sometimes discouraged because the practice of medicine is not as it was in the earlier days; the men of middle age are disturbed by the strenuous competition; the young men disregard the traditions of the past and look upon the field as their own; and that the business and professional methods of the past are obsolete. Then differences in viewpoint have led to divisions in hospital relations and combinations and medical society discord, but we have seen all this before.—Ed. J. Ia. Med. Soc.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS, M.D., Editor.
C. R. ENSLOW, M.D.
J. E. RADER, M.D. Assistant Editors.

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisement must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

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The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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DR. S. L. JEPSON

News of the death of Dr. S. L. Jepson, received late the night of May second, came as a great and unexpected shock to his friends. The entire community will be shocked to read in this morning's papers of the sudden passing of the dean of the physicians of Wheeling and of West Virginia.

Dr. Jepson, it can be said without exaggeration, was one of the best known physicians in the United States. In his earlier years, he was a prolific writer on medical subjects and his articles were regarded as authoritative, not only in this country but in several European countries as well. He was a born educator, and believed profoundly in imparting as much as possible of the great truths of preventive medicine to the general public.

He found time, too, in the midst of his extensive practice, to serve his city as a member of the board of education and as a member of the city council. In both these positions, he rendered splendid service. In the board of education, he was one

of the pioneers for a public library in the city of Wheeling and framed the resolution which resulted in the establishment of such an institution here. He was for some time secretary of the board of trustees of Wheeling Female College. In medical circles, it would be difficult to enumerate accurately all of Dr. Jepson's notable activities. He was at various times president of the Ohio county medical society and of the West Virginia medical society; also secretary of both these organizations, and editor for many years of the State Medical Journal.

Dr. Jepson's service as state health commissioner is still fresh in the minds of the people of Wheeling and West Virginia. Despite his advanced years, he filled this high place with credit to himself and to the state. To Dr. Jepson, as much as to any one man, is due the fact that Wheeling is about to get pure water. He was one of the pioneers in the fight and took part in it until it was finally crowned with success only two weeks ago.

Personally, Dr. Jepson was always kindly and considerate, and to say that he had a host of friends is trite. His friends were literally numbered by thousands, and all admired him for his sterling qualities of mind and of character.

With his passing, medicine, education and religion have lost one of their staunchest and most able workers, and Wheeling and West Virginia have lost a man whom they delighted to honor in life and one whom they will sincerely mourn in death.

The following resolutions were adopted by the Ohio County Medical Society, May 6, 1922:

Samuel L. Jepson, A. M.—M. D.—Sc.D.

We meet tonight to mourn the death of our friend and colleague, Dr. Jepson, the Dean of the Medical Profession of West Virginia.

But why should we mourn? His passing was the wished for, quiet, sudden ending of a long, useful, and well spent life of 80 years. A life that was crowned with honors, and blessed with pleasant memories, and gladdened in its closing years by the presence of wife, and daughters, and grandchildren.

Dr. Jepson was born near St. Clairsville, O., April 7th, 1842. He was the son of John and Hannah Hunt Jepson, and was of English descent. He attended Washington and Jefferson College, and graduated A. B. in 1862; in 1865 he received the degree of A. M. from the same college. In 1868 he took the degree of M. D. from the Medical College of Ohio, at Cincinnati. In 1907 he received the degree of Sc. D. from the Western University of Pittsburgh.

September 14th, 1871, he was married to Miss Isabella Scott, daughter of Rev. Andrew Scott, of Jefferson county, Ohio. Their marriage was blessed with four daughters, Mrs. Louis M. Sutton of Clarksburg; Mrs. Charles W. Bates of Wheeling, and Miss Ada Jepson and Miss Jane Jepson, at home.

In 1868-69 Dr. Jepson was resident physician in the Cincinnati Hospital. From 1873 to 1879 he was health officer of Wheeling, and again served in the same position from 1895 to 1901. During the years of 1877 and 1878 he studied in Edinburgh, London and Vienna. From 1884 to 1889 he was acting assistant surgeon in the U. S. Marine Hospital Service. From 1889

to 1893 he was secretary of the board of examining surgeons for pensions, and a member of the board from 1907 to 1915. He was attending physician of the City Hospital from 1890 to 1913, and consulting physician from 1913 to 1915 to the same hospital, now the Ohio Valley General Hospital. Dr. Jepson was always interested in life insurance work and was examiner for many companies. He was editor of the West Virginia Medical Journal from 1906 to 1916, and was the author of a great many valuable medical papers.

Dr. Jepson was always deeply interested in civic and educational matters. He was a member of the city council for several terms. He was a member of the board of education from 1881 to 1892, and in 1897 and 1898 and from 1913 to 1916, and was president of the board in 1891-2. He was state commissioner of health and lived at Charleston the capital of the state, from 1913 to 1921. He has been a trustee of Washington and Jefferson College since 1904.

Dr. Jepson was a member of the American Medical Association and was one of the council from 1901-1904. He was a member of the West Virginia State Medical Society, and was its secretary from 1884 to 1886, and its president in 1887. He was vice-president of the Federation of State Medical Examining Boards in 1915 and was vice-president of the conference of the executive officers of the United States, and provincial boards of health in 1916. He was a member and vice-president of the American Public Health Association.

Dr. Jepson was the highest type of a scholar and Christian gentleman. He was the senior presiding elder of the First Presbyterian church and during his whole life, in walk and talk and example he was always a most consistent Christian. As a citizen he was public-spirited, outspoken, frank and honest in the expression of his opinions on municipal, state, or national politics, and always took an intelligent and conservative interest in all public affairs.

Dr. Jepson was a most fluent and graceful speaker and writer. He was very widely read both in professional and general literature. His choice of words, both in speaking and writing, was most exact and accurate, and his extempore remarks at any time could be taken down in shorthand and published without correction or alteration.

He was a gentle, loyal, lovable man with a multitude of friends who will sadly miss his kindly, cheerful, helpful presence, and those who recall him as the faithful physician will hold him in grateful and affectionate remembrance.

The memory of Dr. Jepson will long be revered by his professional brethren, and we, the members of the Ohio Council Medical Society, desire to record an expression of deepest sorrow in his death, and extend to his family the assurances of our sincerest sympathy.

JOHN L. DICKEY,
JAMES SCHWINN,
ROBT. J. REED,
Committee.

I feel that words fail me in an effort to describe my personal sense of loss in the death of Dr. S. L. Jepson. My earliest remembrance of the State Association pictures him as always present in the meetings,

and always on the front seat that he might miss none of the program.

Toward me his attitude was always one of kindly interest and encouragement. To him and that rapidly disappearing generation of physicians of my early days in the state membership, I attribute the interest in the association work which has continued to grow greater year by year.

Dr. Jepson did much for our body over a long period of years because of his enthusiasm and ability. It is due to his persistent efforts in the years past that the Journal was finally established with himself for its first editor. For this alone he will be remembered so long as the West Virginia Medical Association continues to exist.

All of us will miss him, and I am sure I voice the sentiment of our entire membership in extending to his family our most sincere sympathy in their bereavement.

WHAT ARE YOU GOING TO DO ABOUT IT?

In this issue of the Journal appears a paper with the above title. I am sure that each member of the association will find much food for thought in this article.

All of us know how the members of our profession are held in ridicule when it comes to a question of investments and so on. Certainly there are exceptions among our ranks, for some have proven themselves to be astute financiers. Still as a rule, the criticism holds true. We are so busy trying to keep the wolf from the door and make both ends meet, and giving of our very life's blood to cure disease and alleviate pain and suffering, that we have no time to give thought of the morrow.

When one of us does ask that he be paid his just hire for conscientious service rendered, and insists upon it, of those able to pay, he is immediately branded as mercenary, as heartless, not caring for the sick patient but only for what he can get out of it.

My personal observation has been that the worst critics of a "business" physician are the very ones who laugh at the physician as being lacking in qualification for business men, and who do not pay their physician's bills.

Then the author takes up the matter of the many and varied agencies at work to take away from us the sources of our very livelihood. Is there any business or profession on the face of the earth but ours, which is constantly trying to find means to do away with the commodity in which they deal? No wonder the essayist gets "hot under the collar" and says "apologies to nobody."

Read this paper and think it over. Let us try to decide what we are going to do about it.

DR. JAMES WARREN McCOY

On Saturday, March 18, 1922, Dr. James Warren McCoy, the Dean of Practicing Physicians and Surgeons in McDowell County, W. Va., died of pneumonia at Twin Branch, W. Va., after an illness of only three days.

Dr. McCoy, while only past his sixty-eighth birthday, was one of the pioneer physicians of the Norfolkk & Western coal fields, being the first regular graduate in medicine to practice in Welch, W. Va.

He came of a family of surgeons, his father Dr. John A. McCoy hav-

ing spent his entire active life as a surgeon in the United States Army.

He was born within the borders of the Keystone State March 4, 1854, was a graduate of the University of Pennsylvania Medical School in the class of 1876, and, after spending his early years of practice in the United States Indian Service in Texas, came to McDowell County, W. Va., where he has practiced continuously until his death, and where he was widely known and much revered by countless patients and friends.

He was a member of the Presbyterian Church and a Master Mason.

He was the soul of honor in his dealing with mankind, a courageous gentlemen, and a literary devotee—being not only familiar with medical and surgical writings, but conversant with the classics and the best of modern literature.

He was married in 1881 to Miss Nannie W. Barnes of Campbell county, Virginia, by whom he is survived together with five children; Jack A. of Washington, D. C.; Mrs. Carrie Perkins, of Richmond, Va.; Harry A., of Twin Branch, W. Va.; Wesley C., of Richmond, Va., and Thomas R., of Dott, Va., and twenty-two grandchildren.

The remains were tenderly placed at rest in Springg Hill Cemetery, Lynchburg, Va., on Monday, March 21, 1922.

Thus, after 46 years — almost half a century—of healing the sick and caring for the wounded, not in easy places, but midst the dangers and difficulties of the frontier and the skirmish lines of civilization, this beloved and faithful physician has rent the veil bounding this life of sacrifice and service and has passed to the Great Beyond, there to take his place beside the Great Healer and receive the plaudit—"Well done, good and faithful servant, enter thou into the joys of thy Lord." —J.H.A.

STATE AND GENERAL NEWS

It will be of interest to the physicians of the state to know that our old friend Dr. B. B. Wheeler is back in West Virginia as surgeon and chief of staff of the King's Daughters General Hospital at Beckley. At present their accommodations are for forty patients and about May 1 it is hoped they will open a hospital with about seventy-five beds. The staff is composed at present as follows: Surgeons, B. B. Wheeler and J. A. Campbell; medicine, K. M. Jarrell and D. B. Jarrell; eye, ear, nose and throat, W. W. Hume and J. H. Hookins; pediatrics, Dr. Lynch.

There is also to be announced a staff of consulting and visiting physicians. There will also be a full time laboratory technician in the institution.

All will welcome "Ben" back and it is assured that he will be at the Huntington meeting in May.

Dr. Forrest Puckett, formerly from Texas, is located at Winding Gulf, taking the position of Dr. A. U. Tieche at that place.

Dr. O. B. Lynch, specializing in pediatrics has opened offices in the new Raleigh County Bank Building.

The Beckley Hospital, formerly owned by Drs. J. E. Coleman, and Robert Wriston, has been sold to Drs. J. H. McCullough of Charles-

ton, and A. U. Tieche of Winding Gulf. The new owners are remodeling the institution and making many changes. They have associated with them Drs. A. H. Grigg and Charles S. Smith.

Dr. George W. Johnson of McAlpin, spent several days in Richmond recently.

Dr. Charles S. Smith of Beckley, spent two weeks in New York recently doing post-graduate work.

Dr. W. W. Hume spent several days in Charleston recently on business.

Dr. M. V. Ziegler of the U. S. Public Health Department, at Charleston, spent a couple of days in Beckley recently where he appeared before the county court in the interest of having a full time public health department in Raleigh county.

Dr. Robert Wriston returned recently from taking several weeks post-graduate work in Chicago and has opened offices in the new Raleigh County Bank building.

Dr. J. E. Coleman spent several days recently in Chicago on business.

Dr. J. E. Coleman has sold the Oak Hill Hospital, Oak Hill, to Drs. C. B. Lee and Gory Hogg and others. The hospital will be in charge of Dr. R. L. Penn. Dr. Charles S. Smith who has been associated with the hospital for the past two years will remain on the staff.

Dr. and Mrs. K. M. Jarrell are the proud parents of a bouncing baby girl.

Dr. George Fordham of Wyco, was a recent visitor to Beckley.

Dr. J. W. Van Pelt of Oak Hill was a recent visitor to Beckley.

CHAS. S. SMITH, Sec.

We have just received the notice of the death on January 11 of this year, of Dr. J. R. Kincaid of Frankford, W. Va. At the time of his death Dr. Kincaid was sixty-seven years of age. He was a graduate of the Medical College of Virginia, Richmond, Va., graduating in the class of 1878. The cause of death was pernicious anemia.

The many friends of Dr. R. H. Pepper of Huntington, who has recently returned from the Mayo clinic, will be pleased to know that he is greatly improved inhealth. He is now able to be out of the house and attended the last meeting of the Cabell County Medical Society.

DIED: April 10, 1922, Silas Alfred Cavalier, of Beverly, Randolph county. Born in Harrison county, graduate of Baltimore Medical College, 1889. Spent most of his life in Harrison county. Moved to Beverly in 1912. Cause of death was pernicious anemia.

Before the year ends the U. S. Public Health Service expects to add three more hospitals to the fourteen it has opened since January 1, last. It is also preparing nine other hospitals, four of which will probably be opened by May 1, and the others a little later. All of these hospitals have either been leased from private owners or taken over from the army or the navy, the new construction authorized by congress at the extra session not yet being well under way.

Hospitals put into commission

during the last three months include the former Navy Hospital at Gulfport, Miss., with 150 beds; the hospitals at Jackson Parks, Chicago, Colfax, Iowa and Portland, Ore., with a total of 350 beds; and the Edward Hines Junior Hospital at Maywood, just outside of Chicago, with 1,000 beds. Those to be opened in December are the Fort McKenzie at Sheridan, Wyo., and one of the two buildings at Fort Logan H. Roots, at Little Rock, Ark. with a total of 480 beds. The Navy hospital at Las Animas, Col., 750 beds, now operated by navy surgeons, will be taken over as soon as a suitable public health service staff can be organized. These hospitals will increase the capacity of all service hospitals to about 22,600.

Hospitals planned to be opened for 1922 include the tuberculosis hospitals at the beautiful Dawson Springs, Ky.; Excelsior Springs, Mo.; and Rutland, Mass., with a total of 920 beds; the general hospitals at Fort Walla Walla, Wash., near the junction of the coast wheat and fruit belts, and at Norfolk, Va., with a total of 1240 beds, and the neuro - psychiatric hospital in the Bronx, New York City, with 1,000 beds.

COUNTY SOCIETY REPORTS

The Barbour-Randolph-Tucker County Medical Society met in the Y.M.C.A. building at Elkins, W. Va. on April 19, 8:30 p.m.

Present, Drs. Wilson, Pierce, McIntosh, Moore, S. G. Bosworth, A. S. Hall and Irons, and Rev. McConoway, visiting Dr. Pierce, the president.

Minutes of previous meeting read and approved. Secretary reported returns on the vote of full term medical college question, 14 no, 26 yes. Secretary read replies to the query as to the status of the so-called Advisory committee to the A. M. A. who had asked the passage of certain resolutions censuring the arbitrary and undemocratic actions of the A. M. A. society, from Dr. A. R. Craig, Secretary of A. M. A., and also Dr. F. M. McMechen, Sceretary of the self-styled Advisory committee. From these letters with citations from the A. M. A. Medical Journal, it was the opinion of the society that the Advisory committee was not authorized and was self-constituted, and therefore the requested action was laid on the table.

Dr. A. S. Bosworth offered the following resolution, which was passed:

"Whereas, the medical profession recognizes the great peril to the public of venereal disease, from which which the innocent is not immune, and,

Whereas, No effective efforts have been made, so far, inaugurated to control this ever present menace;

Therefore, Be It Resolved, that in order that our Bureau of Venereal Diseases may have additional light on the factors that may have some bearing on the prevalence of gonorrhea and syphilis, as well as the expression of the profession of the state, or some measures of prevention, we request that the Bureau of Venereal Diseases append the following inquiries of physicians reports of these diseases:

The causative relation of illiteracy, of poverty, of single standard of sexual morality, of mastubation

of other diseases, of war, of want of education on sexual matters, of congenital deficiency.

Give your views as to the effectiveness of therapeutic prophylaxis. Of circumcision. Of early marriages. Of licensed houses of prostitution."

The resolutions were passed by unanimous vote:

(1) The society having heard of the death of the wife of Dr. E. M. Hamilton, a member of our body, Resolved, That we express to him by vote, our deep sympathy in this, his hour of sadness amid affliction. The secretary was directed to communicate to the Hamiltons the action of the society.

(2) Whereas, The secretary of the Y.M.C.A., Mr. Houck, has tendered the free use of the building to the B.-R.-T. Society, where we have our meetings;

Therefore Be It Resolved, That we tender a vote of thanks of Mr. Houck and the board of directors for this courtesy to the society, the secretary to convey same to the parties.

The secretary read the committee's report on the death of Dr. W. W. Dear, of Parsons. The report was adopted, and ordered recorded in the minutes, and a copy sent to the family.

Dr. E. M. McIntosh read an excellent paper on "The Tonsil Question." The doctor emphasized the great importance of the careful examination of the tonsils when diseased as they are the source of so much constitutional trouble by absorption. The little pockets of pus formation should be carefully looked for, and evacuated if possible. As local applications good may be obtained from painting with Tr. iodine; solution of nitrate of silver, 50 gr. to oz.; various preparations of iron; tannic acid in glycerine; X-ray and auto-vaccination.

In chronic, badly diseased tonsils tonsillectomy is the only sure cure. He prefers the snare method as the safest and freest from hemorrhage. He prefers as local measures, hot gargles, rather than cold. He has had good results in suppurative tonsillitis by the use of linseed meal poultices, and gargles from infusions of linseed.

Dr. Irons read a paper "One of Our Great Problems," in which he showed the great menace to our country by the increasing number of defectives and degenerates, with no legal or medical means of limiting or preventing the increase. He rigorously recommends as potent protective measures:

1. A stricter marriage law or laws, demanding a certificate from an authorized and competent source of moral, mental and physical fitness, before a marriage certificate shall be issued.

2. Where it can be reasonably enforced as it can be, in our penal institutions, sterilization of defectives and the criminals should be enforced.

He insists that the medical profession should arouse public sentiment along these lines, and should suggest suitable legislative measures, to meet the emergency. Dr. Bosworth moved that the paper be given to the press for publication to educate the public. Motion passed.

Dr. Pierce reported a case of Addison's disease, but to our disappointment the patient being a soldier and under hospital treatment, had been ordered to report and could not be present. Dr. Pierce

said this was quite a rare disease, only 170 cases so far reported in the United States.

On motion the society adjourned to meet in July in Elkins, unless desired by members in Tucker county to meet with them.

J. C. IRONS, Sec.

Bluefield, Dec. 22, 1921.

The Mercer County Medical Society met in the directors room of the Chamber of Commerce, Masonic Temple at 8:30 p.m.

President Slusher being late coming in, Dr. H. C. Hays acted as president pro tem for the first part of the meeting.

The secretary read the minutes of the previous meeting which were approved by the society.

Under clinical cases Dr. C. M. Scott reported two very unusual cases of dislocation of the patella into the knee joint. In other words these patellae were driven back to the posterior part of the knee joint. He showed very plain X-ray reprints of each of these cases. The first was caused by the patient striking it against a switch light while catching a train. The second one was caused while the patient was riding a merry-go-round, and knocking his knee against some of the machinery of the hobby-horses. One of these patellae was fractured and sutured with kangaroo tendon in the open operation method, put up in plaster paris two weeks and results turned out to be fine.

The third case Dr. Scott reported was a mixed cell-sarcoma of the submaxillary glands of six months standing.

Dr. Slusher reported a case of ulcer of the stomach, now hemorrhage from the stomach and bowels, also vomiting blood.

Dr. Steele related a case of empyema, congestion of one lung and adhesion of the pericardial sac throughout in the same patient. Autopsy proved the above.

Dr. Scott mentioned a case he had had of hydrothorax on the left side. The patient died.

Dr. Hays read a very instructive paper on headache and neuralgia of the nasal and accessory sinuses. He said many headaches and neuralgias were of nasal origin. He spoke of how easy it was to relieve many of these cases by injecting a ganglia just back of the middle turbinate bone with cocaine and adrenaline or phenol 5% in alcohol 95% alcohol, many colds due to swelling of the soft parts are relieved in this way, also hay fever is improved under this treatment.

Dr. Rodgers reported a case of diabetes insipidus in which the symptoms were controlled by injections subcutaneously of from ½ c.c. to 1 c.c. of pituitrin one to three times daily. This was an excellent paper and was discussed by Dr. Kirk and closed by Dr. Rodgers.

Dr. Slusher, the out going president, expressed his appreciation of the society electing him to this high honor and he thanked one and all for their hearty co-operation throughout the year.

The application of Dr. F. J. Collison, Bluefield, W. Va., was received. Adjourned 10 p.m.

H. G. STEELE, Sec.

Bluefield, Jan. 26, 1922.

The Mercer County Medical Society met in the office room of the Chamber of Commerce, Masonic Temple, at 8:15 p.m., with the newly elected president, Dr. H. C. Hays,

in the chair.

The minutes of the previous meeting were read by the secretary and approved.

Under clinical cases Dr. H. G. Steele reported a case of repair of tendons of the back of the hand of the little and ring fingers of a child eight years old. There was a severing of the fourth and fifth metacarpals at the time of injury, with ununion of the bones and free action of the tendons at this time.

Dr. C. W. Slusher reported a case of asthma in a child four years old, the attacks of which were eliminated by withdrawing milk. Even bread made with milk produced a recurrence, and by leaving out the milk in making the bread the asthma did not return. Called protein sensitization.

Dr. Kirk mentioned a case of asthma in a woman suffering from an attack of urticaria.

Dr. Reynolds related a case of asthma in a child produced by the odor from a horse.

Dr. Collison's application for membership was voted on favorably and he was accepted on condition that he is registered at the county clerk's office and has a certificate to practice medicine in this state.

The Busy Bee Restaurant's bill of $17.00 was accepted and ordered paid.

There were fifteen members and one visitor present.

H. G. STEELE, Sec.

Bluefield, Feb. 23, 1922.

The Mercer County Medical Society met in the director's room of the Chamber of Commerce, Masonic Temple at 8:15 p.m.

The minutes of the previous meeting were read and approved.

Under clinical cases Dr. Thomas E. Peery gave us one of the best clinics given before this society for many years. He showed us eight cases of folliculosis of the 1X and 2X type, and two cases of real Egyptian Trachoma, or the 3X type as classified by Dr. Ziegler, a government specialist, who visited Bluefield about a week previous.

This clinic was made very interesting by Dr. Peery showing us the difference between the 1X type, the 2X type and the 3X type as the real Egyptian Trachoma, and the discussion which followed by most all of the doctors present.

The doctor's treatment for the first and second type was a 2% solution of Sophol dropped into the eyes once a day, followed by a mild astringent solution, such as zinc sulphate and boric acid dropped into the eyes several times daily.

He presented a few patients upon which he operated a week or so previous, showing considerable improvement.

Under discussion Dr. Chas. St. Clair said he felt the school nurse had stirred up a great deal of trouble; said he had seen some several cases of folliculosis, but had not seen any trachoma. He believed if left alone they would get well.

Dr. Slusher said he had recognized several similar cases when he examined the school children a number of years ago, and he did not feel it worth while bothering with.

Your secretary said he felt it was up to us all to cooperate with the board of health of Bluefield and the school authorities in stamping out this eye disease, cooperate with the board of health even if they were

wrong; then later on when any epidemic should break out here in Bluefield or Mercer county the health authorities would know they had the members of the Mercer County Medical Society back of them.

Dr. Hays said he favored the idea of supporting the health authorities in this movement.

In closing the discussion Dr. Peery said it is contagious and infectious, that he had seen several families where every member was infected with this folliculosis.

Dr. Vass made a short speech in his behalf as president of the board of health of Bluefield.

Dr. J. H. Bird read two clinical cases.

The March and April programs were read.

H. G. STEELE, Sec.

Princeton, March 30, 1922.

The Mercer County Medical Society held its regular monthly meeting in the dining room of the Virginian Hotel.

President Hays called the meeting to order at 8:15 p. m.

The minutes of the previous meeting were dispensed with.

Under clinical cases Dr. Harloe exhibited before the society a patent he was much interested in, but was unable to make a definite diagnosis, and the members of the society were not able to enlighten him any. This was a diabetic patent fifty years old. He had had pleurisy and a swelling in the back of the left side of the chest. Dr. Harloe had incised this and two cups or more of clotted blood came away.

The first on the program was Dr. Sam Holroyd, from Athens, who read us an interesting paper on mental hygiene. Dr. Holroyd said he did not approve of children being trained or developed in one thing or subject too early in life. The muscles of a child should be developed earlier than the mind.

Under discussion Drs. Thornton and Rixie made some complimentary remarks.

In closing Dr. Holroyd said we should raise our boys for a general purpose and see that they get plenty of good common horse sense.

Next on the program was Dr. Arthur S. Jones, of Huntington, who read us a very thorough, interesting and instructive paper on Tuberculosis of the Spine. In part he said: "Deformities are of neglect. They come on between the ages of five and sixteen. The dorsal is the region of the greatest deformity. Tubercular abscesses develop in from 5 per cent to 7 per cent of the cases. Don't open a tubercular abscess but aspirate it. Pain is the earliest and most frequent symptom.

Paralysis may come on slowly or suddenly. Measurements of the patients annually is important. Operate only after adolescence. Rest and time are essential."

Under discussion Dr. Hare said we owe Dr. Jones a vote of thanks for reading to us this magnificent paper, which was gladly extended to him unanimously.

The secretary said he appreciated Dr. Jones' paper very much and hoped we as professional men, would encourage all we could such men as Dr. Jones, who devote their entire time to a specialty.

Dr. Wallingford asked Dr. Jones why it was that fifty per cent of tuberculosis of the bones was in the spinal column.

Dr. Rixie and Dr. Rogers discussed the paper freely.

In closing Dr. Jones said the reason for so much of the tuberculosis being located in the spine was because the body of the vertebrae was of a cancellous nature.

Drs. W. B. Sisson and E. F. Thompson were elected members of the society.

Dr. C. E. Hancock's application was received.

Drs. R. H. Kessel of Charleston, W. C. Covey of Goodwill, Arthur S. Jones, of Huntington, Oran, of Princeton, and twenty-two members were present.

The following instructions were read by the secretary:

1. All narcotic prescriptions must be written either with ink or indelible pencil, as must all opium order forms.

2. A record must be kept showing disposition of all narcotic drugs purchased, except that which is administered personally at the bedside.

3. Any drug left with the patient, any administered personally at the office, a record must be kept. This record must show name and address of patient, reason for narcotic, and quantity given, and date.

4. Write Collector White and secure regulations No. 35, on opium, etc. Study carefully.

5. In writing prescriptions for narcotics for patients over sixty years of age you must write on the prescription: This patient is suffering from tuberculosis, cancer, or some other incurable malady, and morphine is necessary to sustain life.

The programs for April and May were read.

A five course banquet was served and we started for home, after having a delightful meeting.

The first meeting of the Raleigh County Medical Society for 1922, was held March 1, at the home of Dr. W. W. Hume. A very enjoyable meeting and a good dinner was meted out to those who were fortunate enough to be present. Several good motions were made and adopted; several committees have been appointed; a regular meeting date (fourth Thursday night in the month) has been arranged; delegates to the state society have been appointed, etc.

Now you know the secretary catches the "devil" anyway, but he feels that you fellows who are not fortunate enough to be present at each monthly meeting are entitled to know something of what is transpiring in the society, and he is going to "burn some midnight oil" and let you fellows know something of where "your seven dollars" is going. We understand that many men are prevented from coming to our meetings on account of the roads, but when spring rolls 'round, we are going to count on you. Let's put our shoulders to the wheel and have a good meeting each month.

Listen! A program committee consisting of Drs. Dupuy, Hume and Wriston have been appointed to select a program for each meeting; these fellows are going to arrange good programs; they will turn their programs in to the secretary who will advise you when you are to read a paper; you will prepare your paper, forward it to the secretary, who will see that it is read by some member if you are not present. Now let's not make "John do it," but let's hold up our end of the game.

Another committee consisting of Drs. Tieche, K. M. Jarrell, Cook and Smith have been appointed to revise the fee list and report at the next meeting.

The next meeting will be on April 27, 8 o'clock, Beckley, in the rooms of the Chamber of Commerce. We hope you will be present. Now, if you are selected to prepare a paper please respond promptly. This is your duty. You will not be called on but once a year. You can write a good paper and we know it, and if you do your duty when called on, it will make the other fellow feel ashamed of himself when he fails to respond.

Let's make the Raleigh County Medical Society second to none in the state of West Virginia.

CHARLES S. SMITH, Sec.

The April meeting of the Raleigh County Medical Society convened in regular session Tuesday evening, April 11, 8 o'clock, in the Chamber of Commerce, Beckley, Dr. B. W. Eakin, president, presiding. Minutes of previous meeting read and adopted. Motion made and adopted that the Raleigh Herald be paid a bill of $16.50 for stationery. Motion made and adopted that the following new members be accepted: Drs. J. H. McCullough, O. B. Lynch, B. B. Wheeler and George Fordham.

Drs. B. B. Wheeler and A. H. Grigg were appointed delegates to the state association which convenes in Huntington May 17, 18, 19. A report was made to the society by the fee-revising committee and many changes in the fees was made. Motion made and unanimously adopted that the society extend to the state association an invitation to meet in Beckley in 1923. More than twenty letters were received from members out of town who could not be present, expressing themselves as being in favor of extending the invitation. It was explained that booth space for various exhibits would aid in defraying the expense of entertainment. Motion made and adopted that Drs. C. S. Smith and M. C. Banks be appointed as a committee to revise a pamphlet pertaining to Beckley and including our invitation to the state association, have same printed ready for distribution at Huntington.

Dr. O. B. Lynch read an interesting paper on "Marasmus" and Dr. A. H. Grigg reported an interesting case of "Stricture of the Esophagus." The society voted its thanks to these men for their interesting instructive and enjoyable papers. The secretary reported with the exception of one man the society now had 100 per cent membership. The following members were present: Drs. Fred Stansbury, A. U. Tieche, O. B. Lynch, J. H. McCullough, U. G. Cook, D. B. Jarrell, J. A. Campbell, C. S. Smith, B. W. Eakin, J. E. Coleman, B. B. Richmond, T. F. Garrett, E. S. Dupuy, A. H. Grigg, E. H. Hedrick, J. H. Hoskins, M. C. Banks. Considerable interest is being taken in the society this year by the members and the society as a whole appreciates the interest. We must work together and help build the society up to a high standard. We appreciate the April attendance and wish for an improvement at the next meeting. Let's all go to Huntington and boost the Raleigh County Medical Society, Raleigh County and Beckley.

CHARLES S. SMITH, Sec.

The West Virginia Medical Journal

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Under the Direction of the Committee on Publication

JAS. R. BLOSS, Editor
Huntington, W. Va.

J. E. RADER, C. R. ENSLOW, } Assistant Editors.
Huntington, W. Va.

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PROGRAM OF FIFTY-FIFTH ANNUAL SESSION WEST VIRGINIA STATE MEDICAL ASSOCIATION — HUNTINGTON, W. VA., MAY 17-18-19, 1922.

Officers of the Association for 1922:

President, George A. McQueen, Charleston.

First Vice-President, J. R. Caldwell, Wheeling.

Second Vice-President, G. C. Schoolfield, Charleston.

Third Vice-President, L. H. Goodman, McKendree.

Secretary, Robert A. Ashworth, Moundsville.

Treasurer, Hugh G. Nicholson, Charleston.

Stenographer, Miss Mary Robinson, Raleigh, N. C.

Council, First District, C. G. Morgan, Moundsville; H. P. Linsz, Wheeling.

Second District, J. C. Irons, Dartmoor; C. H. Maxwell, Morgantown.

Third District, C. R. Ogden, Clarksburg; L. H. Forman, Buckhannon.

Fourth District, G. D. Jeffers, Parkersburg; J. E. Rader, Huntington.

Fifth District, H. G. Steele, Bluefield; C. F. Hicks, Welch.

Sixth District, R. H. Dunn, Charleston; J. W. Moore, Charleston.

Delegates to A. M. A:

H. P. Linsz, 1922-1923; J. R. Bloss, 1921-1922.

Editor of The Journal, J. R. Bloss, Huntington.

Committees:

Medical Defense—H. P. Linsz* C. R. Ogden, C. G. Morgan.

Workmen's Compensation—J. E. Cannaday.

Scientific Work—George A. MacQueen, John E. Cannaday, Robert A. Ashworth.

Public Policy and Legislation—John N. Simpson, A. P. Butt, C. A. Ray.

Entertainment—J. E. Rader, R. J. Wilkinson, R. M. Bobbitt, W. E.

Neal, F. C. Hodges.

Arrangements—C. T. Taylor, W. E. Vest, L. T. Vinson, C. M. Hawes, T. W. Moore.

Finance—F. A. Fitch, L. V. Guthrie, J. A. Guthrie, K. C. Prichard.

Reception—Cabell County Medical Society.

Clinics—J. A. Guthrie, R. J. Wilkinson, F. O. Marple, C. T. Taylor, A. S. Jones, W. F. Beckner, Mark Sutphin.

(Clinics will be posted at Frederick Hotel.)

(First named on each Committee is Chairman.)

COUNCIL AND HOUSE OF DELEGATES

Tuesday, May 16, 8:30 P. M.

The Council convenes in Frederick Hotel Tuesday evening at 8:30 Thereafter at the call of the Chairman.

The House of Delegates will meet at the Frederick Hotel Tuesday evening at 9:30. Thereafter at the call of the President.

ORDER OF BUSINESS

Call to order by the President.

Receiving Credentials.

Report of Committee on Arrangements.

Report of Committee on Scientific Work.

Report of Committee on Publication.

Report of Committee on Public Policy and Legislation.

Report of Secretary.

Report of Treasurer.

Report of Council.

Report of Auditing Committee.

New Business.

Election of Officers, Friday morning at 8:30.

Next place of meeting.

Unfinished Business.

GENERAL ASSEMBLY

First Day, Wednesday, May 17

Morning Session

1. Clinics from 8:00 to 10:00 a. m., at the various hospitals and Registration at the Frederick Hotel. 10:00 a. m.Call to Order by George A. MacQueen, President, Charleston.

Invocation—Rev. John S. Jenkins, Huntington.

Address of Welcome on Behalf of the City—Mayor C. W. Campbell, Huntington.

Address of Welcome on Behalf of of the Society—Dr. James R. Bloss, Huntington.

Response on Behalf of the Association—Dr. C. A. Ray, Charleston.

1. West Virginia's Progress With the Model Vital Statistic Law—Dr. Carl F. Raver, Charleston.

GENERAL ASSEMBLY

Wednesday, May 17, 2:00 P. M.

1. No More Physicians Needed in West Virginia — Dr. A. P. Butt, Elkins.

Discussion: Dr. Martin F. Wright, Burlington.

2. Progress of Medical Education at W. Va. University—Dr. John N. Simpson, Morgantown.

Discussion — Dr. A. T. Post, Clarksburg; Dr. J. R. Bloss, Huntington and Dr. V. T. Churchman, Charleston.

3. The Value of Cystoscopy and Radiography Combined in the Diagnosis of Diseases of the Urinary Tract—Dr. Oliver P. Barker, Parkersburg and Dr. R. H. Boice, Parkersburg.

Discussion—Dr. Aubry C. Belcher, Huntington, and Dr. R. K. Buford, Charleston.

4. Fluoroscopic Examination of

the Urinary Tract—Dr. A. L. Gray, Richmond, Va.

Discussion—Dr. W. A. Quimby, Wheeling.

5. Operative Repair of Certain Congenital and Acquired Defects of the Face—Dr. Vilray P. Blair, St. Louis, Mo.

Discussion—Dr. Frank LeMoyne Hupp, Wheeling.

EVENING SESSION

Wednesday, May 17, 8:15 P. M.

1. President's Address — Dr. George A. MacQueen, Chairman.

2. Oration on Medicine—Dr. G. B. Capito, Charleston.

3. Oration on Surgery—Dr. H. E. Slone, Clarksburg.

MORNING SESSION

Second Day, Thursday, May 18, 10:00 A. M.

(Surgical Section and Medical Section meeting separately)

SURGICAL SECTION

Dr. Hugh G. Nicholson, President, Charleston.

Dr. J. E. Cannaday, Secretary, Charleston.

Miss Eugenia Whitehurst, Stenographer, Charlseton.

(Courtesy State Health Dept.)

Clinics from 8:00 to 10:00 A. M. at the various hospitals.

1. Surgical Treatment of Hallux With a Report of a Series of Cases—Dr. J. A. Guthrie, Huntington.

2. Operation for the Correction of Club Feet— Dr. Arthur S. Jones, Huntington.

Discussions opened on both papers by Dr. C. M. Ramage, Fairmont and Dr. H. G. Steele, Bluefield.

3. Appendicitis in Children—Dr. B. B. Wheeler, Beckley.

Discussion—Dr. A. P. Butt, Elkins and Dr. J. Ross Hunter, Charleston.

4. Ruptured Intestines due to Traumatism—Dr. A. G. Rutherford, Welch.

Discussion — Dr. C. F. Hicks, Huntington and Dr. Robert J. Reed, Wheeling.

SURGICAL SECTION

Thursday, May 18, 12:00 P. M.

1. Some Interesting Bone Conditions Illustrated by Lantern Slides —Dr. E. Bennett Henson, Charleston.

Discussion—Dr. D. M. Aikman, Wheeling and Dr. W. W. Golden, Elkins.

2. Cancer of the Uterus—Dr. W. A. Thornhill, Charleston.

Discussion—Dr. J. Ross Hunter, Charleston and Dr. W. H. St. Clair, Bluefield.

3. Tonsils as a Seat of Focal Infection—Dr. T. W. Moore, Huntington.

Discussion—Dr. Thomas E. Peery, Bluefield and Dr. R. H. Walker, Charleston.

4. Intestinal Obstruction—Dr. W. S. Fulton, Wheeling.

Discussion—Dr. R. J. Wilkinson, Huntington and Dr. Roy Ben Miller, Parkersburg.

5. Exophthalmic Goitre—Dr. H. H. Haynes, Clarksburg.

Discussion — Dr. O. F. Covert, Moundsville and Dr. B. H. Swint, Charleston.

6. Pollakiuria—Dr. W. S. Robertson, Charleston.

Discussion — Dr. Aubry C. Belcher, Huntington and Dr. Robert K. Buford, Charleston.

MEDICAL SECTION

Second Day, Thursday, May 18,

10:00 A. M.

Clinics from 8:00 to 10:00 A. M. at various hospitals.

1. Driver or Driven—Dr. J. Howard Anderson, Marytown.

Discussion—Dr. John N. Simpson, Morgantown and Dr. Walter E. Vest, Huntington.

2. The General Practitioner's Compensation — Dr. O. S. Hare, Bluefield.

Discussion — Dr. P. D. Barlow, McMechen, Dr. R. O. Rodgers, Bluefield and Dr. Samuel R. Holroyd, Athens.

3. Atropine and Hypertonic Infant — Dr. Arthur A. Shawkey, Charleston.

Discussion — Dr. R. D. Roller, Charleston and Dr. George M. Lyon, Huntington.

4. Digitalis Therapy—Dr. G. H. Barksdale, Charleston.

Thursday, May 18, 2:00 P. M.

1. The Profiteers — Dr. C. H. Maxwell, Morgantown.

Discussion—Dr. C. G. Morgan, Moundsville.

2. Focal Infection and Systemic Disease — Dr. Aaron Arkin, Morgantown.

Discussion—Dr. W. F. Beckner, Huntington.

3. The Use of Radium in Inoperable Carcinoma of the Uterus—Dr. J. Edward Hubbard, Huntington.

Discussion—Dr. W. A. Quimby, Wheeling.

4. Some Aids to Diagnosis—Dr. C. F. Gabel, Charleston.

Discussion—Dr. F. C. Hodges, Huntington.

Premature Labor—Dr. Harry G. Steele, Bluefield.

Discussion—Dr. J. Howard Anderson, Marytown and Dr. C. H. Maxwell, Morgantown.

Third Day, Friday, May 19, 8:30 A. M.

Session of the House of Delegates.

Election of Officers.

Unfinished Business.

General Session

1. Abdominal Pregnancy With Living Child—Dr. J. E. Rader, Huntington.

Discussion—Dr. Robert J. Reed, Wheeling, and Dr. C. M. Scott, Bluefield.

2. Common Conditions in Lower Back Giving Rise to Pain—Dr. J. Torrence Rugh, Philedelphia, Pa.

Discussion—Dr. F. B. Harrington, Weirton.

3. Osteomyelitis — Physician's Responsibilities — Dr. Frank Lemoyne Hupp, Wheeling.

Discussion—Dr. J. E. Cannaday, Charleston.

4. Acute Intestinal Obstruction—Dr. Charles S. Hoffman, Keyser.

Discussion—Dr. J. Ross Hunter, Charleston, and Dr. Henry P. Linsz, Wheeling.

Friday, May 19, 2:00 P. M.

1. Treatment of Acute Brain Injuries With Special Reference to the Indications for Operation—Dr. C. C. Coleman, Richmond, Va.

Discussion—Dr. Hugh G. Nicholson, Charleston.

2. The Clinical Significance of Abdominal Pain—Dr. Ernest LaPlace, Philadelphia, Pa.

Discussion — Dr. Chester R. Ogden, Clarksburg and Dr. James E. Cooper, Cameron.

CLINICAL AND SURGICAL STUDY OF FIFTY CONSECUTIVE PATHOLOGICALLY DEMONSTRATED CASES OF GALL BLADDER DISEASES.

By ROBERT KING BUFORD, Ph. G. M. D., Charleston, W. Va.

The existence of gall stones was recognized in the days of Hippocrates and Galen and occasional reports of incising the gall bladder and removing stones were made as long ago as the sixteenth and seventeenth centuries. Although Bobbs, of Indianapolis, (1) did a cholecystotomy in 1867, the real surgery of the bile tract practically dates from the work of Marion Simms (2) and Lawson Tait (3) in 1878. In 1880 Langenbuch (4) did the first cholecystectomy and in the same year also did a cholecystenterostomy. In 1885 Charles T. Parkes, (5) of Chicago, fully described the technique of choledochotomy, but it was not successfully done until 1889 by Courvoisier. (6) A few years later MacBurney (7) performed a transduodenal choledochotomy. In 1884 W. W. Keen and John Musser (8) reported three cases of gall stones removed from the gall-bladder and tabulated all the cases up to that time, eighty-five in number. The mortality of this series was 30 per cent.

In 1910 MacCarthy (9) demonstrated pathologically that gall bladder disease was a form of inflammatory tissue reaction like in every way to a similar reaction in other hollow abdominal viscera. In 1914 Rosenow (10) showed the frequent bacterial etiology of such inflammation. He appeared to prove that bacteria are commonly first carried to the gall-bladder by way of the blood stream, and when found in the contents of the gall-bladder they have been cast off from the wall of th eviscus as inflammatory by-products. It is unfortunate that these facts, established by bacteriologists and emphasized by clinicians, have not as yet received proper recognition from practitioners in general, or even from internists and surgeons of large hospital experience.

My report attempts to set forth certain useful conclusions drawn from an analysis of fifty consecutive operatively-demonstrated instances of gall-bladder diseases. The records and pathological reports are those of hospital patients, under my personal care.

GENERAL CONSIDERATIONS

1. Sex. There were thirty-three white females, two colored females, thirteen white males and two colored males. It is noticeable that there were more than twice as many females as males.

2. Age. The average age for the entire series was 35.2 years. The youngest patient was a female sixteen years of age, who had chronic cholecystitis without stones. The youngest patient with gall stones was seventeen years old. The maximum age was fifty-eight years; this patient was a female giving a history of cholecystitis of twenty-five years duration. She also had an associated duodenal ulcer producing marked pyloric stenosis.

3. Operative Prcedures Before Coming Under Observation: From five patients the appendix had been removed; one had had the gall bladder drained, and pelvic operations

had been done on four.

4. Previous and Infectious Diseases: Thirteen subjects had had typhoid fever; twelve, tonsilitis; eight, infected teeth; seven, measles; four, scarlet fever; and three diphtheria. In many of these diseases streptococci are fairly constant findings, and Rosenow has demonstrated a peculiar affinity of organisms of the coccus group for the walls of the alimentary tract, particularly that of the gall bladder. These bacteria are quite commonly found in the gall-bladder mucosa, in the bile and the interior of gall-stones. Moynihan has said every gall-stone stands as a tomb to a dead bacterium. It is evident, therefore, how important etiologically is the history of such diseases as measles, scarlet fever, tonsilitis, arthritis, whooping cough, influenza, mumps and diphtheria, those usually recorded in histories under the title of "diseases of childhood." The demonstration on physical examination of infected gums, sinuses, maxillae, joints, tonsils and superficial lymph-node-chains further emphasizes the probability of the presence of a causative agent in the production of alimentary tract disturbances.

It has often been noted that recent attacks of cholecystitis are more frequent during pregnancy. If a demand for excessive function be made upon a bile tract already the seat of disease, it would appear reasonably to expect bacterial proliferation and inflammatory change to occur as a consequence of lessened local tissue defense.

CLINICAL SYMPTOMATOLOGY

General; A careful analysis of the histories of the patients disclosed records of mild digestive upsets. It was also surprising how many patients gave a history of acute infectious diseases, jaundice some years previously, or, upon close questioning, recalled forgotten painful attacks that had been passed off as "acute indigestion," "gastralgia," Ptomaine poison" and the like.

(a) Type of Individual. There is a general misconception that patients affected with gall-bladder disease are over-nourished, or even obese. The diagnostic dictum—particularly with regard to females—of "fair, fat, forty, belches gas, hence gall stones" has obtained a greater vogue than its alliterative or pathologic accuracy warrant. Only six of my patients were obese, and twenty had lost from five to sixty pounds. Those suffering from simple cholecystitis, with or without stones, either maintained weight, or lost it intermittently.

(b) Belching and sour eructation were prominent and distressing in forty cases. Nausea and vomiting were annoying in twenty cases.

(c) Appetite was good in eighteen, fair in seventeen, and poor in fifteen cases.

(d) Bowels—Thirty were chronically constipated, constipation alternated with diarrhea in five cases, and persistent diarrhea with associated pancreatitis was present in one case.

Relation of type of symptoms to pathological changes. It is not possible before laparotomy to group cases as simple, uncomplicated cholecystitis or as associated with gall stones. This can only be borne out by observations made at oper-

ations. So-called biliary cholecystitis is more common in stone cases than when stones are not present. Jaundice occurred in nineteen patients; usually one can only make the diagnosis of cholecystitis and if jaundice is persistent, associated with attacks of severe pain, such attacks being frequent and the disease having existed for longer than six months, it is safe to hazard the prognostic statement that in addition to the inflamed gall-bladder stones may be present. Persistent jaundice means duct obstruction, generally of the cystic or common duct.

Pain: This was a characteristic symptom in all the twenty-five stone cases. The pain was at first localized, later radiating to the back, sometimes to the left breast and right shoulder. A constant discomfort or heavy sensation after eating was a characteristic symptom in the non-stone cases.

Relief of Pain: The severe colics need opiates; 50 per cent of our cases required morphine during the acute attacks of distress; 75 per cent were relieved by hot drinks and gastric lavage, 30 per cent by vomiting; alkalis relieved the distress in 20 per cent of the cases. The alkali facilitates the belching, or counteracts sourness or the sensation of burning.

Characteristic of Pain: (a) Ttime —the pain appears irregularly in an individual previously, apparently well and it occurs constantly without any apparent definite cause. This is in striking contrast to the clear-cut time—and relation-factors associated with peptic ulcers, where, in more than 80 per cent of uncomplicated cases, there is a direct relationship between cause and effect. In peptic ulcer the pain occurs quite regularly from two to six hours following food intake; it has a characteristic form of relief, namely, by food ingestion, alkali or vomiting. Rarely in ulcers is the pain severe enough to require administration of opiates.

(b) Type of Pain: The severe colics are usually described as knife-like, sticking, stabbing, "doubling-up" or boring pain. This distress is probably more prostrating than in any other form of digestive upset, unless it be that associated with perforation of a gastric or duodenal ulcer.

Location of pain: In 75 per cent the pain is in the right upper quadrant. Often it is generalized throughout the entire epigastrium; not rarely there is a widely dissiminated area of discomfort, with a spot of especial distress at the right costal margin.

Abdominal tenderness was noted in all my fifty cases; this was more marked over the gall-bladder area. Rigidity of right rectus muscle was a constant finding in twenty-five patients. The gall-bladder was palpable in five cases, and the liver definitely palpable in twenty-five.

Laboratory findings: Twelve patients passed clay-colored stools; excess of bile pigments in the urine was present in twenty-five cases. In association with colic and evidence of obstructed bile-flow, the classic triad of symptoms—chills, fever and sweating—was noted in five cases.

Gastric analysis was done on twenty-five patients. Achylosis gastrica was observed in five cases and the remaining twenty showed normal acid contents. A Lyon's duo-

denal drainage was done in ten cases before operation and in one case after operation. I was unable to differentiate the so-called (b) gall-bladder bile from the common duct and the hepatic duct bile. We considered a microscopic finding of calcium crystals, bacteria and cholesterol as suggestive of a bile-tract infection.

Roentgen evidence of gall bladder disease: Defects of the duodenum and stomach due to adhesions from gall-bladder ducts, resulting from a peri-cholecystitis, were demonstrated in three patients. Stones in the gall-bladder were clearly shown on the plate made from a patient with a large duodenal ulcer. There was a six-hour retention of the barium meal in all the three cases. In a number of cases, without defects due to adhesion, hypermotility was a frequent observation. Gall-stones can only be demonstrated by the X-ray in a little oven 20 per cent of the cases. This in itself would eliminate the X-ray as a reliable constant diagnostic procedure. However, we feel that X-ray gastric studies in these cases are very essential to rule out, by exclusion, ulcers of duodenum and stomach.

Laparotomy findings: Cholecystitis associated with cholelithiasis was demonstrated in twenty-five cases. In fifteen the stones were confined to the gall-bladder; to the cystic duct in eight cases and the common duct in two cases. There was thickening and edema of the gall-bladder wall and enlargement of the lymph nodes along the bile ducts in the twenty-five cases of chronic cholecystitis or "strawberry gall-bladder."

Associated lesions: The concommitant incidence of appendicitis and gall-bladder disease has been frequently noted. McCarthy (9) found definite gross and microscopic appendix lesions in 69 per cent of fifty-nine patients operated upon for gall-bladder affections. In my series, five patients had had their appendices removed before coming under observation for the gall-bladder ailment. At laparotomy there was sufficient pathology to warrant appendectomy in twenty-five cases. In many the histories indicated appendiceal disturbances before gall-bladder functions were sufficiently impaired to give rise to definite symptoms. Five "Lane kinks" were found and repaired. Two cases had chronic salpingitis, and one had a large duodenal ulcer. The liver was enlarged in thirty of my cases. Graham (16) found twenty-six, or 87 per cent of liver enlargement and thirty cases of bile-tract infection which had come to operation. In cases of acute or sub-acute cholecystitis he constantly found microscopic evidence of inflammation in the liver. Cultures from both the liver tissue and the bile in the gall-bladder have usually revealed the same organism from each of the two different sources. The gross enlargement of the liver is probably usually due chiefly to edema. The enlarged livers in this series have always diminished markedly or returned to normal size after appropriate surgical treatment. Associated pancreatitis was noted in five cases.

Surgical pathology of gall-bladder: In one case of hydrops the fluid contained was clear and the sac one-third full of stones. One stone

was embedded in the cystic duct.

In all six cases of empyema of the gall bladder the walls were thick, necrotic, very friable and distended with pus. Sixteen gall-bladders were adherent to the duodenum and stomach, or the omentum, which had followed chronic inflammatory changes in the gall-bladder in the non-calculous cases. The basis of gall-bladder pathology is largely the reaction of the four layers of tissue to infection. The infection is most commonly of the blood and lymph, because bacteria first produce changes in the mucosa and submucosa, causing congestion and infiltration of the villi with lymphocytes. In stiu chronic gall-bladder (strawberry type) to sight or touch presents no marked variations from the normal. The palpating hand of the surgeon detects no abnormality unless excessive mucous excretion has occurred and the bile is thickened so that it is forced through the gall-ducts with difficulty. Such gall-bladders are commonly called "normal" and remain untouched, yet this type is seemingly the foundation for the majority of gall-bladder ailments. It is also the actively infected type, as it most frequently furnishes the purulent, necrotic, gangrenous and perforation complications. The whole gall-bladder need not be involved. The fundus is quite commonly affected early, and remains infected longest. The contents of the gall-bladder is usually thick bile mixed with mucus; stones and sand may form within a few weeks. They have as their nuclei agglutinated bacteria, precipitated mucous and cellular debris. There is usually an excessive secretion of cholesterin. In our series, twenty-five caes were of the strawberry type, and in these the mucosa was most affected. It was congested, strawberry-red in color and velvety. The apices of the villi had become eroded and lost their epithelium. Consequently yellow specks dotted the reddened mucosa. They represent minute bits of scar tissue where the epithelium has been destroyed.

Operative procedures: Seven gall-bladders were drained. Cholecystectomy was done in the remaining forty-three cases, including the biliary fistula case which had been drained elsewhere. Fifteen of the excised cases were not drained. In each of these cases the cystic duct was divided with the electric cautery between clamps and doubly ligated. Though no conclusion can be drawn from this small number of cases, I was much impressed with the smooth convalescence in each case. I cannot find in the literature any note of a cautery ever being used before in the technique of cholecystectomy.

Post operative complications: Four patients had post-operative pneumonia, one pleurisy (dry), and three suffered surgical shock.

Mortality: Three patient died, one from post-operative pneumonia, and the other two from cardiac insufficiency. No operation was refused. A mortality of six per cent seems rather high and could have been reduced by a better selection of cases. However, Smithies, (1) mortality was 5.9 per cent in one thousand consecutive operative cases (1918). Deaver (12) (1916) reported 1013 cases with a mortality of 7.2 per cent. Twenty New York hospitals report four thousand

cases with a mortality of 8.3 per cent. Mayo (13) reports 4,000 cases with a mortality of 2.75 per cent.

End Results: We were fortunate in hearing from each patient by letter or being able to make a personal examination. One empyema perporation with resulting diffuse peritonitis was drained with relief of symptoms for six months; the patient had recurrent attacks of biliary colic until the gall-bladder was removed. One case with associated pancreatitis was not benefited by cholecystotomy. One patient with a calculus of the common duct has an occasional acid eructation. However, she feels she was benefited by operation; a cholecystotomy was done in her case. All of the remaining forty-four cases were completely relieved of symptoms presented before operation. The gall-bladder was drained in the two patients with recurrence of symptoms.

DISCUSSION

We are getting away from the "stone age" in the surgery of the gall-bladder and coming to depend more upon the appearance of the gall-bladder and the adhesions and glandular enlargement about the cystic duct for information regarding the past inflammation and future history. The effect upon the biliary system of removal of the gall bladder is still experimentally unsettled, but we have known for years that removal produces no subjective symptoms.

If we conceive of the stomach as exercising, in the main, two functions — that of motor function and of secretion — we may usually expect that any irritative condition reflexly affecting the stomach would probably cause an aberration in one or both of these functions.

For a long time medical opinion considered gall stones the only pathological evidence of gall bladder disease and they were interpreted as the essential pathological evidence of gall bladder disease and they were interpreted as the essential pathological process. With greater refinement of diagnosis, the extraordinary development of the x-ray and other laboratory procedures, there has ensued a reconstruction of our pathologic conceptions of the affections of the biliary tract. From the pathologic study emanating from the operating room it has become definitely established that it is the infection of the biliary tract itself which gives the surgical indication rather than the accidental sequelae or incidental occurrence of stones.

In the "strawberry" gall bladder of Moynihan stones are absent, likewise in some forms of fibrosis of the gall bladder. It is the infection that begins in the gall bladder which sets in motion a series of changes, bringing about the inaugural signs of cholecystitis.

Gaseous indigestion is due to motor and sensory disturbances in the stomach, reflexly produced by infective changes in the gall bladder.

In speaking of gastro-duodenal ulceration we refer to the regularity of the symptomatology, while in speaking of cholelithiasis we speak of the irregularity of the dyspepsia that is produced. In gall bladder disease the indigestion is vague and irregular, with ill-assorted grouping of the symptoms. This indigestion conforms to no rule and exhibits no constancy. It is characterized by

an absence of periodicity and it may be catalogued by its predominant symptoms, gas production, that is, flatulence. In gall bladder disease there are various degrees of gas production; eructations, a sense of fullness, weight or oppression, occasionally tenderness along the right costal margin. There may be a "catch" in the right side upon taking a full breath and occasionally after large meals a slight sensation of chilliness. This gaseous indigestion is characteristically made worse by the eating of any fried foods or greases or—less commonly—apples, meats and cheese. There is usually some relief upon raising or belching of gas and almost complete cessation of the symptoms upon vomiting. Occasionally the history is obtained of the patient retiring after dinner and voluntarily inducing vomiting with almost complete amelioration of the symptoms. It is worthy of note that the patient is relatively free from symptoms when the stomach is empty, which is in marked contra-distinction to duodenal ulcer, where the patient is usually at his best when food material is in the stomach.

This form of indigestion may continue for an indefinite period and exhibit itself without any marked variation from the above picture. After a long or short period of qualitative dyspepsia there is introduced into the patient's history another symptom different from any of the preceeding, and this is represented by a sudden, acute attack of agonizing pain. The onset of the second cycle of symptoms is quite characteristic, coming out of a clear sky, without any warning or premonition. The patient is seized—usually in the evening—with a sudden intense attack of cramp-like pain, commonly in the right upper quadrant. This comes on like a stroke of lightning, radiating through the back, occasionally down the right side or up over the right chest, less frequently toward the left breast. It is of maximum intensity, associated with restlessness and usually so severe as to require the services of a doctor and a hypodermic injection of morphine. This agonizing pain lasts a variable length of time, four to six hours, disappearing almost as quickly as it comes, leaving a residual soreness in the right upper quadrant or along the right costal margin. There may be some temperature during the height of the paroxysm.

Jaundice is not an indication of simple cholecystitis, but is usually a symptoms of cholagitis or calculous obstruction within the lumen of the common duct, or occasionally of infection of the cystic duct with edema in the common duct.

In considering jaundice in biliary disease, statistical inquiry has demonstrated that according to its causation jaundice may be classified in the following numerical order; (1) Gall stones, (2) Catarrhal jaundice, (3) Cancer of liver, (4) Cirrhosis, (5) Cancer of the pancreas and (6) Gastric and duodenal carcinoma. By eliminating catarrhal jaundice and cirrhosis of the liver, the diagnosis becomes one of differentiating between the jaundice due to gall-stone disease, and that from malignancy of the bile-ducts.

Catarrhal jaundice is a disease named after its most prominent symptom, for its designation has no stable pathological basis. Jaundice

that comes with or without gastro-intestinal symptoms, with a duration of four to six weeks and then disappears, is designated as catarrhal jaundice. The systemic changes are slight in this type of jaundice and differ from other types where the systemic changes are marked. Emaciation is of little clinical value for it occurs equally with gall-stones, catarrhal jaundice, and malignancy.

A cure within six or seven weeks establishes a diagnosis of the catarrhal form. Jaundice that does not clear up after six weeks is either a complication of another condition, or evidence of a wrong diagnosis.

The characteristic discoloration seen in obstructive jaundice is never observed in catarrhal jaundice. Stupor does not occur in mild types of jaundice or gall-stones, and is only a terminal sign in malignant disease. Stupor only occurs in cirrhosis and acute yellow atrophy.

Jaundice due to gall-bladder disease rarely develops after the first attack and seldom appears suddenly or without colic; most gall-stones are formed in the gall-bladder and to reach the common duct must migrate through the cystic duct. In the course of this migration, colic develops. When the stone reaches the distal portion of the cystic duct, jaundice may arise either from compression or from coincidental inflammation.

In diseases of the biliary apparatus, we find a composite picture in which four well-defined stages of pathology are evidenced.

1. When the disease is confined to the gall-bladder.

2. When there are attacks of biliary colic.

3. When jaundice occurs from common duct obstruction.

4. When infection of calculi produce coincident disease of the pancreas.

The diagnosis of calculous disease of the common duct is made upon colic, icterus and sepsis, and the symptoms occur in that order.

In cystic duct obstruction there are colic and fever, and the symptoms occur in that order; but there is no jaundice. In about 25 per cent of cases, stones in the common duct are not diagnosed because at the time the patient presents himself jaundice is absent. Inquiry, however, will reveal that in 85 to 90 per cent of the cases there is a history of the colicky jaundice.

The first factor in calculus obstrction of the common duct is the production of acute biliary obstruction with achylous stools. After a variable period of cholangeitis, distention of the duct behind the obstructive calculus occurs, the duct dilates and the stone floats into the more ample and dilated common duct so that biliary delivery into the duodenum is resumed.

Between attacks of calculus obstruction of the common duct the patient may be apparently well but is practically never free from a subicteroid tint, or slight jaundice. She is designated as sallow when she is really suffering from a continuous and persistent low-grade jaundice or a jaundice of remittent intensity. Many of these patients are persistently sallow and notice that the jaundice varies during the day, becoming deeper toward evening. With each attack of pain and jaundice there is fever of a characteristic "steeple chart," while early in calculus obstruction the liver, and

generally the spleen will be enlarged.

The resultant pathologic condition is a dilated and infected common duct, with a calculus floating up and down — the "ball-valve stone" of Easter and Fenger (14) and the mechanical factor is chronic, intermittent, intrinsic occlusion of the common duct.

Stone in the common duct is preponderantly the result of a previous infection of the gall-bladder and predicates a chronic cholecystitis with cicatrization and contraction. Of one hundred and eighty-seven cases of obstruction of the common duct reported by Courvoisier, in one hundred the obstruction was due to causes other than stone, and in eighty-seven to calculus impaction; in ninety-two there was a dilatation or distention of the gall-bladder, and in eight cases there was a normal gall-bladder or gall bladder atrophy. Of the eighty-seven cases in which obstruction was due to stone, in seventy the gall-bladder was atrophied, and in seventeen dilated. Courvoisier enunciated his law—"In cases of chronic jaundice due to blocking of the common duct, a contraction of the gall-bladder signifies that the obstruction is due to a stone; dilation of the gall-bladder that the obstruction is due to causes other than stone."

In reporting the cases of the Massachusetts General Hospital, Cabot (15) found eighty-six cases of obstruction of the common duct. Fifty-seven were due to calculus obstruction. In forty-seven the gall bladder was atrophied; in eight it was normal, in two enlarged; twenty-nine cases of obstruction were due to causes other than stone; in twenty-seven the gall-bladder was distended, in one, empty, and one was contracted around calculi. But four cases of this series were exceptions to Courvoisier's law. With the exception of these four cases which constituted only five per cent of the total number examined, every record of the Massachusetts General Hospital series in which definite statements are to be found concerning the patients at issue, goes to confirm Courvoisier's law.

CONCLUSION

1. All gall stones have their origin in a primary cholecystitis.

2. The infection is almost always blood—and lymph-borne and is frequently associated with a primary lesion elsewhere in the abdomen.

3. Appendices showing definite pathologic lesions are found in a surprisingly large number of gall-bladder lesions and are frequently the cause of primary cholecystitis.

4. The most important detail in the diagnosis of gall-bladder disease is a time-consuming history.

5. The clinical age is not necessarily the pathological age. We are no longer living in the "stone age." Formerly we had to find gall-stones before we were convinced that a patient had gall-bladder disease.

6. Cholecystectomy in my limited experience has proved to be the operation of choice. I rarely do a cholecystotomy. The mortality is now sufficiently low to permit decision for or against the operation to be judged largely by the percentage of ultimate cases cured of symptoms, presented before operation.

7. The average text-book considers cholecystitis in a vague un-

certain way, as though it were not the intra-abdominal disease, second in frequency only to the lesions of the appendix.

8. In non-operated cases there are very few deaths from the actual disease of the gall-bladder, but morbidity is long continued.

9. The effect of removal of the gall-bladder upon metabolism is apparently very slight. Under normal circumstances, bile is ejected into the duodenum in intermittent spurts, whereas, after removal of the gall-bladder, the bile passes into the duodenum in an almost continuous stream. This is due to the uniform dilation of the common duct after cholecystectomy caused by paralysis of the sphincter of Oddi at the ampulla of Vater.

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THE INTERPRETATION OF THE WHITE BLOOD COUNT

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Read before the Cabell County Medical Society

In an effort ot render blood counts of more practical value to the clinician this paper is offered; and not to discuss any of the many moot points in hematology. Blood examinations are very valuable, and sometimes indispensable in diagnosis, but are not to be relied upon as short cuts and labor-saving devices to supercede a careful clinical investigation, and should be considered a link in the chain of evidence which goes to make a diagnosis or a prognosis.

All human blood cells can be traced to one parent form. An unbroken series of cells representing successive stages of development are found between this parent form and the normal cells of the blood. The cells closest to the parent form show different characteristics at an early period by assuming either a basophilic or a neotrophilic proto-

plasm. Subsequently, these cells divide into other forms, constituting on the one hand, a transition into the mature neutrophilic granular cells of the bone marrow, the neutrophilic myelocytes, and on the other hand, pass by further intermediate stages, into lymphocytes and transition forms. (1) The polymorphonuclear neutrophiles are derived from the myelocytes just mentioned.

Of the many forms of white cells, only two will be here considered; viz. the polymorphonuclears and the mononuclears. The former have origin chiefly from the bone marrow, and sometimes from the spleen, (2) the latter from lymphoid tissues in various parts of the body. The total number of white cells per cmm. varies in health between 7,000 and 10,000, according to age, sex, and especially the phase of digestion. When the number passes 10,000 a leucocytosis exists; when it falls below 6,000, a leucopenia. The polynuclears, form, on an average, 70% of the total number, and the mononuclears 30%. In children under 5 years of age, there are usually as many mononuclear cells as polynuclears.

A slight physiological leucocytosis takes place following a meal, in which there is a relative lymphocytosis. This is because the lymphocytes contain a fat-splitting ferment, and possess amoeboid movement and phagocytic power for fats. By means of the latter, an elective chemotatic influence is exerted on the lymphocytes within the vessels, and attracts vastly more mononuclears than polynuclears. (3)

INFECTIOUS LEUCOCYTOSES

The leucocyte count in an infection varies according to the bacteria producing it and to the tissue involved. The pyogenic bacteria, which usually affect tissues poor in lymphoid elements, are combatted by means of the polynuclear cells; hence it is that in these infections we find a polynuclear leucocytosis, provided, of course, that nature is able to respond to the call. The common pyogenic bacteria are; staphylococci, streptococci, pneumococci, gonococci, meningococci, colon baccilli, and the micrococcus catarrhalis. When these bacteria are present in a tissue from which drainage is poor or impossible, and their toxins are absorbed, very large numbers of polynuclear neutrophiles are present; but when drainage is good, and therefore little or no absorption of a toxin, there is little or no increase in the neutrophiles. For example, a staphylococcic infection in the appendix or peritoneal cavity would give rise to a high neutrophile count, while the same bacteria on a raw skin lesion would give rise to little or no increase; a very small amount of pus in the middle ear, under high tension, gives rise to a remarkably high neutrophile count, whereas the same amount of pus in a pustule would cause no change. An increase in the percentage of neutrophiles indicates, therefore, absorption of toxin from a pyogenic infection or disease, in some part of the body, but cannot point out the tissue involved nor the particular bacteria concerned. All other things being equal, the less drainage, the higher the count. (4) Ninety-six per cent is the highest neutrophile count I have seen.

MATERIAL REQUIRED

Here let me urge the importance of doing both a total leucocyte count and a differential count, as our most valuable information is obtained from a comparison of the two. If only one can be done, then let it be the differential, for then we can learn not only the relative proportions of leucocytes, but can search for parasites, make observations for anemia, or leukemia, and gain some idea of their total number. All that is required to take blood for this count is two clean glass slides and a cutting needle (A hypodermic needle will answer), so this adds very little to the clinician's bedside armamentarium. For the total white cell count, a blood pipette and a diluting fluid are also required.

INDEX OF RESISTANCE

In considering infections by pyogenic bacteria, as a rule, a high temperature and a high total white cell count, indicating good resistance, go hand in hand; a rapid, feeble pulse, and a high percentage of neutrophiles with a comparatively low total count, indicating poor resistance go hand in hand. Blood counts may be divided roughly into five groups, according to the severity of the infection and the resistance of the patient, as follows:

Increase of Total White Count	Increase of Neutrophile %	Degree of Infection	Resistance.
1. Little or none.	Little or none.	Very mild.	Very good.
2. High.	Little or none.	Mild.	Good.
3. High.	Little or none.	Severe.	Fairly good.
4. Little or none.	High.	Severe.	Poor.
5. Little or none.	High.	Very Severe.	Very poor.

Considering, as before stated, 10,000 leucocytes and 70% polynuclear neutrophiles as upper normal limits, and assuming that they normally increase in the ratio of 1 per cent of polynuclears to 1,000 leucocytes, we may employ a simple formula, as devised by Sondern, for calculating the resistance. (5).

(T-10) - (P-70)—Index of Resistance.

T is the digits in the thousands place in any given leucoyte count, 10 is the digits in the thousands place of the high normal count; P is any given polynuclear neutrophile percentage; and 70 the high normal neutrophile percentage.

By taking out 10, we may simplify the formula to T - (P-60)—I.R.

Examples.

1. Leucocyte count 26,000.
Polynuclear percentage 83.
26—(83-60 equal x2 I.R.

This was a case of acute appendicitis with the appendix considerably swollen and inflamed, but no pus was present.

2. Leucocyte count 15,000.
Polynuclear percentage 92.
15 - (92-60) equal 17 I.R.

This was a case of severe gallbladder infection, with the patient going down hill.

In following the course of an infection, it is important to repeat the blood counts, just as it is important to repeat the taking of the temperaure.

I believe that it is agreed by surgeons that the best time for operating on a case of appendicitis is as soon as the diagnosis is made.

But there are often times when, for various reasons, it had best be deferred if possible. I believe the blood count, in these cases, offers the surest method of picking those which can from those which cannot be deferred.

Other methods of computing the index of resistance have been devised, (6) but the one given above seems to me the most useful. However, when we have an infection with a non-pyogenic organism, which usually attacks tissues rich in lymphoid elements, we have not a polynuclear leucocytosis, but a relative lymphocytosis, as it is the lymphocyte which forms the pivot of defense in these cases. Here the rule of resistance does not apply. Of the common pathogenic organisms which are non-pyogenic may be mentioned the malaria plasmodia, typhoid and para-typhoid bacilli, tubercle bacilli, (unless in very large numbers) and tetanus bacilli.

SIGNIFICANCE OF EOSINOPHILIA

Normally we have about 2% of eosinophiles. We usually find an increase of them in intestinal parasitic infections, often 15% to 20%. In trichinosis we find the highest percentage of any disease, sometimes as much as 75%. True bronchial asthma, anaphylactic reactions, and a considerable number of chronic diseases show an eosinophilia: I have frequently noticed it to a slight extent in operating room personnel, which is probably caused by the irritation of the bichloride, with which the hands are sterilized.

The eosinophiles are decreased by pyogenic infection, and often none are found. An increase of the neutrophiles with a marked decrease of the eosino philes is known as "Simon's Septic Factor" and is a strong indication of pyogenic disease or sepsis. Here may be mentioned the statement emphasized by Nageli as a law: "A disease in which eosinophiles are present in one-half normal, normal, or increased numbers cannot be typhoid; and the appearance of even a few of these cells must incite caution in the diagnosis." Personally I do not recall ever having been an eosinophile in a case of proven typhoid.

OTHER POLYNUCLEAR LEUCOCYTOSES

Bacterial infection is not the only cause of leucocytosis. It may be caused by overdoses of the blood poisoning drugs; potassium chlorate, phenacetin, and arsenic; after chloroform, and in hemoglobinuria.

Tuberculin injections cause a definite rise in leucocytes. After an acute loss of blood, we see a leucocytosis.

In cases of malignant tumors, ulceration or other inflammatory complications are the most definite cause of leucocytosis, and the resulting hemorrhage adds to the increase in white cells seen in bleeding and necrosing tumors. Degeneration and necrosis of tissue and foci of cells must account for the leucocytosis seen in many large cellular and rapidly growing tumors. The inflamed lymph nodes in the vicinity of malignant tumors indicate absorption of irritants, but these nodes seem to furnish few new cells to the blood, since the increase is usually polynuclear. In general,

sarcoma affects the blood and leucocytes earlier and more than carcinoma. (8).

The absorption of the products of disintegration of tissues, such as a badly bruised extremity, or a hemorrhage into the peritoneal cavity, causes quite a marked leucocytosis. Recently, Moody has reported that out of 107 cases of skull fracture the average leucocyte count was 15,000 (9). This was probably due to the disintegration of the blood following the fracture, and the absorption of the protein split products.

SUMMARY

1. All human blood cells can be traced to one parent form.

2. We may consider 10,000 white cells per cm. and 70% polymorphonuclear neutrophiles as high normals.

3. Whether, in infections, we have a neutrophilic leucocytosis, or a lymphocytosis, depends upon whether the infection is caused by a pyogenic or a non-pyogenic organism. If the former, we find a polymorphonuclear leucocytosis; if the latter, a lymphocytosis, provided the body is able to respond. In the severest infections, we may have a paralysis of the blood-forming organs, consequently a normal blood count.

4. Of the various formulae devised for aiding in making a prognosis, that of Sondern has proven most valuable in the largest number of cases.

5. As causes of leucocytosis other than infections may be mentioned digestion, blood-poisoning drugs, the absorption of split products of protein disintegration, (blood, degenerating tumors), tuberculin injections, and malignant tumors.

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RADIUM IN THE TREATMENT OF CANCER OF THE CERVIX UTERI*

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In our paper today we propose to discuss only cervical carcinoma and notwithstanding the fact that a very extended personal experience as to numbers, in the use of radium as a therapautic agent during the past four and one-half years is at our disposal our interest at present is entirely concerned with cancer of the cervix uteri. Among our cases are three of corporeal malignancy, but these are purely incidental, so also are we not now concerned with vulvar or vaginal cancer of which

several have likewise come to treatment.

For many years past and particularly since the perfection of the Wertheim operation the propaganda for early operation for cancer of the cervix has been a most active one as has been that for cancer all along the line. If the results of this propaganda are to be measured by the operability of the patients who come to us with uterine carcinoma, we must admit that it has not been altogether a brilliant success. It may be that the high primary mortality has some effect, it may be the small number of permanent cures has likewise had a decided influence. Be that as it may our percentage of operable cases since we have been using radium has undergone a decided betterment, incidentally a good attributal directly to this agent whether through curiosity, a desire for something new or greater publicity we would not venture to say though our opinion is, the fact of a major operation being unnecessary, the treatment has been recommended by one poor unfortunate to another as a cure for uterine bleeding. The results of operation for these complaints have not in the past been so brilliant.

Previous to using radium our percentage of operability, as that of operators of the most extensive experience in our community was quite low. In our present series it is 16.9% possibly 21.1%. This compares favorably with Clark's of 20%. In St. Louis we find Taussig with a 25% operability while Jacobson reviewing the work of 18 surgeons estimates a combined percentage of 46.2. In England, Wilson gives 32% and in Vienna, Wertheim 50%—Bumm gives in Kronigs clinic in Freiburg 78.9% and in Boston we find Graves, from whom the above figures are quoted, gives an operability of 64% out of 181 cases. These statistics are exceedingly interesting and serve to show that where propaganda is best organized, in those localities where people are best taught to heed certain symptoms, there will they sooner consult the better clinics and the better men.

Much has, however, yet to be done to educate the profession to heed the earlier manifestations of this and other malignant diseases. Lynch believes, from the mass of material as he sees it, the profession is doing little to improve the cancer situation and that in the hands of men doing surgery the disease is quite as hopeless as it was years ago. He thinks cancer of the cervix is the great problem, so few are cured and in the late cases operation intensifies the suffering and makes the condition worse. In his opinion if there is a question as to operability, the case does not permit of surgery. Samuel also sorrowfully holds the profession to blame for the hopeless inoperable cases we see today, and says 80% of his cases are clearly in the inoperable stage of hopelessness with metastases, parametrium and illiac glands involved when he first sees them.

As a surgeon we are compelled, upon the basis of our own observation with modestly large opportunities, to agree with Samuel and yet we do not wish to be understood as discussing radium from a standpoint inimical to surgery. We are not enthusiasts—we have had very grave doubts and yet, from a standpoint

free of prejudice or possibly in spite of prejudice we have been forced to certain definite opinions which are rapidly approaching the point of convictions.

Our experience with radium extends over a period of about 4½ years, although in our group of cases none treated within the past six months is listed. During this period we have treated seventy-one cases of cancer of the cervix—three of the uterine body. We have arrived at some very definite conclusions and our opinion as to the value of radium in the treatment of cervical cancer is daily more favorable to its use, even in the early cases. This in the face of the face that our work is entirely surgical and our viewpoint biased and tinged by our surgical inclinations. For us the value of radium is no longer conjectural or speculative, as a palliative remedy its usefulness is beyond the peradventure of doubt and we are further firmly convinced that as a curative agent in cervical cancer, if we are to consider the five year period as an expression of cure, it has establihed a position probably equal possibly surpassing that obtained by operative means. We say this advisedly recognizing full well the brilliant results at present obtained by radical surgery in the early operable cases.

In this discussion and to understand fully the often wonderful effect of this element we divide our cases into three groups:

1. The Early or distinclty operable cases.

2. The Borderline (mostly inoperable) cases.

3. The late cases, which have undoubted and evident local extension often with metastic and general involvement.

Every one of our cases has been verified microscopically and the pathological type of growth has been studied in each but our studies in this direction, having not as yet been fully completed, we are necessarily not prepared at this time to take up this side of the topic as bearing upon the value of radium. Suffice to say, however, that with other observers we have noted basal cell growths slow to metastasize, yielding, when seen early, readily to both operation and radium.

The early cases—These are the only ones in which today there may be some difference of opinion as to the best plan of treatment to be followed. Taussig's series showed no operative mortality and Kelly operated 20 consecutively without a death Grave's series of 114 early cases show a primary mortality of 5.2%—99 of his cases having been subjected to the Wertheim operation. When we study the 5 year cures in these early cases we find in Grave's series 16.8 to 18.5 per cent absolute cures and 27.6 to 34.2 per cent relative cures. Bumm's statistics of January "19" quoted by Taussig show 203 cases operated in 1911 to 13 with a five year curability of 77 cases—37%. In 1913-14 he also treated 77 cases with radium 17 or 22% remaining cured for five years. Not having analyzed these cases myself we assume they were all of the operable group. From this study one is seemingly forced to the conclusion that certainly in the hands of the highly skilled early operation presents the best chance of five year cure attended by a fairly low primary mortality. I am

inclined to the view, however, that generally speaking the Wertheim operation is attended not only by a much higher primary mortality, but certainly a much lower percentage of five year cures. For my own part previous to our using radium our five year cures did not nearly approach such figures.

It is probably true as Taylor says that operability formerly led to operation when the chance of cure was slight and the operative risk great; today many of these cases are treated with radium which also has made a new group of cases in that it makes cases operable. Two such, are reported in our series. Incidentally we may say here Taylor believes that even the operated cases should have radium treatment as offering the best chance and in his experience nothing has produced the favorable results in inoperable cases as has radium. Lynch states that the early growths are best removed by wide or extended operation and that nothing treats so successfully as radium those case in which extend surgical removal is not permitted. This is also the expressed opinion of Burnam, Graves, Miller of New Orleans and Jno. G. Clark, though in the latters mind there seems some doubt as he further says in the discussion last year at the meeting of the A. A. of G. "with the use of radium the operative indications will steadily diminish." Personally, we are constrained to agree with this latter opinion. Certainly simple hysterrectomy has no place in the treatment of uterine cervical cancer and if operation is elected it must be of the radical and most extended kind just as we are doing for carcinoma of the breast.

Our group of cases includes 12 of the early distinctly operable type—six of these were operated by the Wertheim method combined with radium. Three are living and completely well after four years, one after three years, one after two years and one after one year. The other six of this group were treated with radium alone, three of which are alive and completely well after three to four years and three after two to three years. One of these cases we have seen within the past few days. In addition to these these twelve cases three others were observed which might probably have been successfully operated, but they were classified as borderline alive and well after more than 2 years.

The interpretation of the dividing line of the early or distinctly operable and the borderline type of case will vary with the individual. We have classified as early those in which the uterus was distinctly and freely movable without vaginal, especially anterior vaginal, involvement and without the least fixation of the uterus, in fact the disease still distinctly local.

Borderline cases—In this class we believe that beyond question radiation is the treatment of choice for we believe the radical operation in this type of case has resulted in not only a high mortality primarily, but in very few permanent cures. It has often befallen our lot to begin such an operation in the belief that radical removal was feasible only to find the invasion so extensive that cure was out of the question. With isolated involved glands in such cases removal of the in-

volved glands when possible followed by radium is far better for the patient than any so-called radical proceedure.

Unquestionably if the disease is one of fairly extensive local involvement radium yields the better results. Even bladder fistula which may follow is preferable to cancer death and affords an opportunity for later repair. Just how many of such cases are in our series we cannot say for having arrived at the conviction that such cases had best be radiated they have all been grouped among the late cases. None of them were cauterized or curetted as we are convinced curettage is not a proceedure ever to be applied in malignancy for very evident reasons. The vast majority of cases as we see them are definitely in group "three."

Distinctly and undoubtedly late cases with extensive local involvement or metastases more or less widespread and clearly inoperable. Heretofore, this entire group has either been abandoned surgically or subjected to cautery and curette often to the disadvantage of the patient and followed always by a rapid return of foul discharge and bleeding never in any event prolonging the patient's life or rendering her in the least more comfortable. In such cases even most ardent advocates of early radical removal concede radium first place in the treatment. Kelly and Burnam have 35 such, either late or extensive borderline patients now alive and well after 5 years. Although we have no cases alive after such period there are five such living and apparently well after more than 2 years.

Our practice has been to examine all these patients most carefully per rectum for broad ligament and glandular involvement the same method being persued in the early cases even in the apparent absence of the least degree of fixation. Examination per rectum yields much more information as to deep extension than does either simple vaginal or bimanual examination. Our own observation in these late as well as in the early cases has served to forcibly impress Burnam's statement that "the possibilities of treatment by radium extend from the very beginning of the disease to the last stages of cervical cancer." Even so, neither the profession nor the laity must expect too much; the impossible cannot be achieved notwithstanding the almost miraculous results seen repeatedly by those engaged in this work. Did time permit, a number of apparently hopeless cases could be detailed to all appearance well with complete local healing after from 1 to 4 years.

Our technique in treatment has been that desired by Clark and our results obtained with the smaller dosage such as he uses. Neither our means nor our inclination have permitted massive dosage. We have always been careful to get the rectum and bladder as far removed as possible from the radium by simple gauze pack, nevertheless we have had a few patients with proctitis or with cystitis following prolonged treatment.

Our plan has been to give 2 to 3 exposures of 24 hours each during a period of a week or ten days followed by a second series of exposures in 6 or 7 weeks. Should these 2 treatment cycles fail to result in

most marked improvement further radium treatment has been discouraged. Our distinct impression is that if the good to be expected is not obtained in these 2 series of treatments, the case is hopeless from every standpoint. We are at present reinforcing our radium by means of "cross firing" through the abdomen and back with X-ray in the hands of a most competent Radiologist.

We have also observed where the growth was apparently healed and later returned that it can rarely, if ever, be checked no matter how treated, this agrees with the experience of Heyman, Taussig and Janeway. Again we have had individuals in which the treatment seemed to stimulate the growth causing rapid increase in its progress. Whether this is due to a fault of technique, dosage or type or growth, we cannot say. In practically all of our cases, however, there has been an immediate local improvement with amelioration of all symptoms and disappearance of bleeding, foul discharge and pain. In none has the pain been increased as some observers seem to note. Usually, local healing has taken place even in those later dying, the exit being due to internal metastases rather than the local process. Septic absorption from local ulceration has been ended and the cachectic look resulting therefrom has often been banished. We feel that many of these unfortunates have had their lives prolonged, giving up their morphine and to them, as frequently expressed, "it has been worth while."

We have refused treatment to only 8 or 10 possibly 12 patients the local process in all being so extensive that improvement even could hardly be anticipated. We believe in justice to those who may seek radium treatment that it is better to reject these very late and hopeless cases, otherwise the failures of improvement may act as a deterrent to many who, beyond operative relief, might yet be vastly improved or even cured with radium. We must, however, be honest and in no instance promise too much to any of these individuals even though the disease may seem in a most favorable stage. We have never promised nor do we ever speak of a cure, yet we are convinced that the statements of Clark that the results from radium treatment approach closely the operative results is too modest an expression and that when the accumulated cases have been studied the results ultimately will be found to surpass those following operation.

Excluding the few rejected cases our experience is shown in the following tables:

Table 1: Radium Treatment:

Carcinoma of Cervix.

Total cases treated to December 1920—71.

Dead 35.

Living 36.

Carcinoma of Corpus.

Living over 3 years	1
Living over 4 years	2
	3

Table II.

Table II: Carcinoma of Cervix—Radium.

Died, 6 to 12 months after treat.	26
Not heard from, supposedly dead	2
	28

Died 12 to 18 months after treat.	3
Died 18 to 24 months after treatment of internal mestastases.	
Local healing	1
Will die shortly	2
Local healing, pan-hysterectomy 15 mos. after treatment, no trace of disease, injured ureter, attempt repair, death	1
	35

Table III: Carcinoma of Cervix—Radium:

Living	31
More than 4 years after pan-hysterectomy followed by radium	3
More than 3 years after pan-hysterectomy followed by radium	1
8 months after pan-hysterectomy followed by radium	2
2 years after radium treatment followed within 3 months by pan-hysterectomy	1
	38
Less 2 living, both of whom will die shortly and already counted among those dead	2
	36

Table IV. Carcinoma of Cervix—Radium:

Living 6 to 12 months after treat	7
12 to 18 months after treatment (apparently well)	6
18 to 24 months after treatment (all of these very bad—1 in cervix after supra-vaginal hysterectomy	5
24 to 36 months after treatment (3 of which were early cases of adeno-carcinoma)	8
36 to 48 months after treatment (3 were early cases)	5
	31

CONCLUSIONS:

(1) In early carcinoma cervicis in the hands of the best operators the radical operation continues a justifiable proceedure.

(2) All borderline cases should be treated with radium.

(3) Late cases may be improved and palliated by radium as by no other means at our command.

(4) If the 5 year period of curability is to be accepted as indicating a cure then the results of radium treatment surpass by far those obtanied by the profession at large in the treatment of cancer of the cervix.

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THE OPPORTUNE APPEARANCE OF MENTAL SYMPTOMS IN THOSE ACCUSED OF CRIME OR FACING A CRISIS IN LIFE (1).

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If an individual develops mental

symptoms at such a convenient time as the day of his arrest for a crime or some other great crisis in life, the suspicion immediately arises in the average mind that he is "putting on;" and so firmly does such an impression take hold of many minds that it can hardly be dislodged by the presentation of a fair amount of reasoning based on evidence.

In this paper I am discussing this question and presenting the histories of three cases bearing on it, in two of which mental symptoms developed in individuals after being arrested for crimes and in the third case in a woman who was facing separation from her husband and children and probably divorce.

In two of these cases the genuineness of the symptoms were very closely questioned and feeling was so high in one or two of them that no amount of argument or reasoning could have carried conviction that the symptoms presented were genuine. It was reasoned that the appearance of symptoms appeared at too convenient a time to be genuine—the logic stopped there. In the third case (the first of the series) the symptoms of dementia preacox type developed in a woman, not accused of crime, but facing a crisis—the separation from her husband and children—a situation unlike the other two cases where the presence of mental symptoms was not opportune but most inopportune and calculated to hurt her case. Yet the situation here resembles that of the other two cases that symptoms occurred while an individual was under great stress and represented her inadequacy to meet a real situation in life.

Yet before considering the evidence of these cases, let me ask: Is the development of mental symptoms in those accused of crime or facing other great crises in life so very extraordinary after all? On the contrary, is it not a thing that might be expected every now and then? Certainly we know of records of thousands of cases of soldiers who developed mental symptoms at a most convenient time for them—on the eve of battle. I believe the same reasoning which will explain the development of symptoms in these soldiers is sufficient to explain the symptoms of those facing a criminal charge. The soldier feels his total inadequacy, he sputters and goes wrong, just as physical machinery might do when overloaded and so thoroughly inadequate for what it is called upon to do, he develops one of many mental symptoms, hysterical for the most part. A man accused of crime, having no defense, might one would suppose, every now and then show mental reaction similar to that exhibited by soldiers. However, a prior argument such as this will not suffice to establish the genuineness of the cases I propose to report; and so I submit the evidence.

Case 1, is that of a woman aged 45, who had been married 16 years and was the mother of two girls, aged 13 and 15 respectively. For ten years past there had been growing domestic discord. Differences between herself and her husband had increased and they grew more and more apart, and at this time (1917) the husband was asking for separation. Neither charged the other of marital infidelity.

The husband, a business man of great ability, had married his wife

shortly after coming out of college. Since that time he had steadily progressed in his profession by hard work and great industry until he had attained a high position. The wife was a simple, light-hearted girl of limited mental capacity, fond of clothes, automobiles pretty things of all sorts. The huband grew prodigiously; the wife stood still mentally. The husband became impatient at the pettiness of his wife and the little things that absorbed her and her whims and fancies. The wife on her part felt that the husband was becoming less and less interested in her and more and more absorbed in his business and she complained bitterly of loneliness and neglect. Two years ago the wife, nervous and upset, was sent to a summer resort with a relative; and while at this place she wrote to her husband a very strange letter in which she dealt much with sex matters — of things which she thought the children ought to know. This letter showed a mind disconnected, vague, hazy and distinctly delusional. It appeared like the record of a drean. Shortly after this a hearing was held to determine whether the father or mother should have the custody of the children and at this hearing the letter referred to was exhibited. Several opinions were expressed by physicians who testified at this time, one stating she was insane, one that she was highty wrought and hysterical and another that she suffered from dementia preacox. Still another testified she was an imbecile.

At the time I met the patient, two or three years after the episode and hearing, I had several long interviews with her. At no time did she exhibit any delusions whatsoever. She told in simple language the estrangement between herself and her husband as indicated in the early part of this history. She talked quitely and with composure. Never did she exhibit great feeling —at least her feelings were always within control. When confronted with this strange letter referred to, she stated that she considered it thoroughly crazy and that she did not know how she could have written such a letter, that her explanation was she was under such a strain, facing separation from her children and her husband that she did not know what she was doing.

Her conversation to me indicated the mind of a simple-minded woman of meager education and with interests limited to the smaller things of home and family.

At my suggestion the mother took her two girls with a trained nurse to keep in touch with her and to assist her. This arrangement did not obtain very long. The final upshot of the case was that a divorce was granted a little while subsequently. In very recent conversation with a sensible woman who has known the patient from childhood, she told me that she does not consider her in any way out of the ordinary, although she recognizes that the patient is a woman of limited equipment.

COMMENTS. My idea of the case is briefly this: A man of great potential mental growth marries a simpleminded girl. The man grows very rapidly. He is absorbed in his business. More and more he finds his wife uncompanionable. She is turn likes the petty things of life

and lives in a smaller atmosphere of the small town and finds adjustment more and more difficult in a large city. The husband and wife grow apart. The mental operations of the wife, simple in character, are insufficient to adjust themselves to the new life and new environment. The thing is helped along probably by the husband's inconsiderateness and unwillingness to sympathize with his wife's situation. Things grow more and more tense and while in state of great tension and when the question of separation is pending and the matter of the control of the children is at issue, this woman goes to a resort away from home, at her husband's suggestion, and while at this place she writes him a letter which is sexual in complexion and delusional in character with many fantastic, dream-like references. Standing alone it would suggest to any alienist, I believe, that the writer thereof was affected with dementia preacox.

Afterwards the patient herself thoroughly repudiates this letter insisting that it was a dream or fantasy and that she had no idea how she could have written it. In other words, her insight seemed excellent. She exhibited a fairly good appreciation of the whole situation. This woman of simple mind—a very simple mechanism, — a one cylnider mind—under a strain of the situation, developed a dementia preacox episode. This quickly disappeared leaving her the same simple-minded woman she was before.

Case 2. A man about 42 years of age has been in a promoting scheme which required much juggling and much adjusting and re-adjusting and constant manipulation and many complicated financial operations. Things went from bad to worse and finally his schemes collapsed. He was arrested (Oct. 1916) and taken to jail. Here he suddenly lost his memory and talked no longer of recent events but of 1900 and events prior to that time. He was removed to a hospital under the care of Dr. McKennan who invited me to study the case with him and to whom I am indebted for permission to report this case.

On my first examination I found the patient in bed with his eyes almost closed. He is a tall man, rather slender and thin and pale.

His mental attitude was that he was 26 years old, living in Ohio in the year 1900. Many and various questions were put to him in different form and always brought out replies consistent with this idea. He never once failed. He always made replies when questioned but initiates no conversation. The following is a record of game of questions and answers:

Q. Please open your eyes.

A. I cannot, they are nailed down. There is a piece out of the back of my head and plugged in with wood.

Q. How old are you?

A. 26.

Q. Where are you now?

A. Blankville, Ohio.

Q. No, you are in the hopital. Don't you know that?

A. No, I am in Blankville, Ohio.

Q. What season of the year is it?

A. I don't know but it is cold and there is a lot of snow on the ground.

Q. How old are you? (repetition)

A. 26.

Q. When were you born?

A. In 1975.

Q. Then you are 42 years old.

A. No, I am 26.

Q. I suppose you are a great deal upset by these charges of embezzlement against you.

A. I do not know anything about these things.

Q. Can you walk?

A. Yes.

Patient is gotten out of bed and on his feet with some difficulty; in an aimless, uncertain way, like a wooden man or automaton he tries to walk, always with his eyes closed as when I entered the room. He bumps against the wall but not at all hard. He seemed relieved when guided back to bed again.

Questions continued.

Q. How much are 7x7?

A. 48.

Q. 9x9?

A. 81.

Q. 81x4?

A. After much hesitation and several questions, he replies 95.

He said he was weary.

Q. Are you married?

A. Yes.

Q. How many children have you?

A. One daughter, two years old.

Q. When did you come here?

A. I have alway been here. This is Blankville, Ohio.

During my first examination the house physician and a detective were in the room. I asked the detective as to the patient's behavior and his replies. He told me they were exactly as he had often repeated them. He lies always exactly as I had seen him. During part of my examination I leaned with my elbow very hard on his arm pressing harder and harder, a thing that with any ordinary person would cause pain. He made no expression of pain. Then again, while questioning him I pinched him in various parts of the body quite hard. This caused no expression of pain whatever. He resisted forcibly opening of the eye lids. Pupils are rather large, equal, both respond to light, the left seemed a little slower and when it contracted was distinctly oval in vertical direction. The knee-jerks are present, perhaps a little plus. There is complete analgesia which is universal.

This man was examined many times subsequently and his replies were always the same. He said McKinley is president and can correctly state any ordinary event in the year 1900. I examined and made many tests subsequently and the results were always the same. His conduct was one day exactly like that of another.

Comments: Two symptoms which he exhibits—Vorbeireden (speaking beside the mark) and Dammerzustand (twilight consciousness) have been considered by a number of writers as strongly indicative of an hysterical psychosis; and the universal analgesia also points this way. Moreover, the amnesia itself and the general complexion of the mental makeup also points in the same way.

The man's psychosis may be considered as reaction to his environment—an expression of inadequacy to meet the demands of the present situation precisely as in the case of many of our soldiers.

I look upon this case as an hysterical psychosis. This psychosis might afterwards appear as preliminary to dementia preacox; but I am at present inclined to the view that such will not prove to be the

case and rather it will show itself as purely an hysterical psychosis.

Prognosis. I am inclined to believe that this man will continue in this present condition indefinitely, although of course, I realize the possibility that he might at almost any time show some awakening or some very marked change of some sort.

Subsequent Notes. November 4, 1918. His replies are always the same. He tells McKinley is now president. He recognizes no events which happened since 1900. Sensation to pain is absolutely obliterated. He makes no response to most painful tests. K. J. and arm jerks are all exaggerated.

November 8, 1918. I have seen the patient every day or two since last note. His conduct is precisely the same as above. Eyes closed, he makes no conversation except to reply to questions. Constantly says he is tired and he looks it.

Soon after last note the patient—in the condition above described—was removed to the county jail where he remained some considerable time. Here all sorts of tests were tried out to expose the assumed "shamming" of the patient. The removal to the jail seemed like a cruel procedure.

December 23, 1921. The papers state this case is coming up for trial and that the patient seems ready to talk.

Comments. Here we have a case of amnesia, I believe, of undoubted genuineness, the diagnosis resting not only upon mental symptoms but very marked analgesia. The case appears to me precisely like similar cases of amnesia which occurred frequently in the army.

Case 3. The case is of a man of 57, who was arrested in Pittsburgh for fraudulent promoting of stock and was taken out on bail and committed to St. Francis Hospital for investigation as to his mental condition. The following history was furnished me.

This man has been a stock promotor and builder and interested in high finance for 25 years. He talks always of large sums of fabulous wealth and before one enterprise is completed he is going to another. He has organized many companies, some of them successfully. He was always extremely optimistic. on one occasion he paid $50,000 for an option on a steel company and then never went near the place. Lately he has organized a chain of steel companies to beat the U. S. Steel. Everybody is against him—the banks, the U. S. Steel Co., etc. Away back in 1896 he sold 3,600 bicycles when he did not have one that could be delivered. He always felt things could be done and could be delivered. He organized a rolling mill which made enormous amounts of money for the stockholders—$1000 for every $100 invested.

He organized a company with a capital of $3,000,000. He doubled the capital and then doubled it again and sold stock at a great rate, really a valuable and substantial thing; but he made very exaggerated statements concerning it. He showed a picture of the plant having 30 smokestacks when it really had only 12. He never was abashed or put back or embarrassed if a false cheque was returned.

He does not smoke, but several years past has been drinking. He has no religious convictions. He

was educated in the common schools and has had one year in college. He keeps his family in a niggardly way and his wife knows nothing of his speculations. He spends lavishly on a mistress, here and another in New York and has been very free with women generally. He is full of energy and is a man of constant activity. He is thoroughly sure of himself in all respects. His great aim is to be a billionaire—and he does not care how.

October 20, 1920. I saw this man on the 18th at the hospital. He talks very freely and glibly of millions and how he is going to combine the iron and steel companies into one hugh corporation which will rival the U. S. Steel. He speaks of the U. S. Steel as being jealous of him. Yesterday he said he had just figured out that he was worth $4,000,000 more than he supposed the day before. He says test phrases badly, especially "truly rural," which he calls "truly royal." He failed in simple questions, although he sometimes did them correctly. There is marked tremulousness about the face. He himself complained yesterday of his memory, saying it was bad. He mentioned that at one time he got on the wrong train and went to a different part of the country from what he intended.

Knee-jerks are exaggerated. Pupils respond to light but slowly; they are equal. The man makes no complaint of being in St. Francis and seemed to be absorbed in his figures and obvious to his surroundings. Wasserman of blood and spinal fluid have been ordered.

This man's wife called at the office this morning with her 17 year old daughter. They say for some months past he has been nervous and had run down many pounds in weight. He was a man as stout as I a few months ago. He cannot stand still five minutes. He is constantly figuring and talking of mills. Recently they could not locate him for four or five days and did not know where he was. They say that for six months or even more, his memory has been failing and he often repeats himself. They say that now he has "no memory." He wakens quickly at night. They notice no difference in his dress, he never did care for dress. The daughter thinks there is a difference in his articulation, but this is not noticed by his wife. They ask whether he might go insane. They state that while sitting at the telephone he fell over; but as this was during a storm it was attributed to an electric shock.

October 21, 1920. Re-examined yesterday, the same fault in spelling and articulation noted. He also was examined by Dr. W. H. Mayer.

October 28, 1920. I visited him yesterday and he offered to put me in a business where I could easily be worth $5,000,000 shortly. He offered Dr. Mayer a chance to make $10,000,000.

Dr. Ernest Willetts took blood and spinal fluid and reported to me all tests including the Wasserman are entirely negative.

November 3, 1920. I saw the patient yesterday and he was busy with his plans for mills. He thought the best situations were New York and Detroit. He figured out the profits will be 63% in one mill which is not as 70% in another mill which is actually going. He admits large quantities of alcohol. General

physical condition about the same. Optimistic as ever. Diagnosis—Paresis. Pseudo—alcoholic.

February 2, 1921. The large abscess on the neck which was evacuated a month ago has healed. During the time it was in evidence the patient did very little figuring, but recently he has again begun figuring on a chain of mills throughout the country. The other morning he offered to make the lawyer and the doctor and some others directors of his company and furnish them with abundance of his stock. I noted several sheets which he handed me indicating the various profits which he might make.

February 10, 1921. Laboratory tests on the 7th inst. Blood Wasserman, negative. Spinal Fluid Wasserman, negatvie. Noguchi, negative. Cell count, 2. Globulin, negative. Colloidal Gold test, 0011.

Dr. W. H. Mayer and I held a conference this morning and both agreed that this man is in a condition of manic excitement with paranoid trend, that he is insane and unable to carry on his business at the present time.

February 16, 1921. The case was up in Court and application for a guardian for his estate. There is no opposition so the motion probably will be granted.

June 7, 1921. This case came up in Court for hearing and I testified that so far as I was able to judge the man had recovered. I mean he had returned to his real state of health—a moral imbecile or a moron.

June 20, 1921. The man left the hospital June 7th and being unable to raise the bail of $25,000 he was placed in jail.

November 22, 1921. Patient was convicted recently and a new trial was asked for.

At the trial the patient showed the same optimism that he had exhibited all along. He never for a moment doubted the favorable outcome of the trial and when it was actually unfavorable, he never doubted there would be a reversal by the Supreme Court and things would come out all right finally. He is the most irrepressible constant optimist.

Comments. I believe the situation as follows: Here is a man who was a born promoter. He had all the make-up for a promoter, quickness, alertness, suavity, plausibility altogether a promotor by birth. The strenuous life of a promotor with considerable dissipation and then comes collapse, shock, arrest. The man is still a promotor and optimist; but he is unnerved, shaken tremulous and in hypo-manical state with exhaustion. He suggests paresis to examiners. Afterwards the tremulous speech and exaggerated K. Js disappear. Laboratory tests are negative. The man comes down to promotor he always was and always will be. This man undoubtedly suffered from a psychosis. Here again the appearance of it was very opportune for the victim as it was in the other case, but that it should occur at this convenient time seems psychologically plain enough when the history of the case if fully considered.

Conclusion. We have here then three cases, two developing mental symptoms when accused of crime and one when facing a divorce case —at critical times in life. In all 3 cases the strain on the mentality

of the individual was beyond the breaking point—and the break occurred in each case. I think the genuineness of these cases cannot be questioned.

In one case the break produced profound hysterical state, in another case the mental condition was more or less manical in character but having a paranoid complexion, and presenting more or less evidence of physical and psychic exhaustion. In the third case when the break came the symptoms produced were those of episodal dementia preacox.

In two cases the symptoms occurred apparently opportunely in individuals accused of crime whereas in the third case they occurred inopportunely in a woman facing separation from her husband and children; and yet all three are alike in this—that they represented mental breaks in individuals confronted by a great crisis in life, exhibiting in a marked way the individuals inadequacy to meet the crisis in these several situations.

BOOK REVIEWS

Clinical Diagnosis, Fifth edition, by Charles Phillips Emerson, A. B., M. D., Professor of Medicine, Indiana University School of Medicine, J. B. Lippincott Co., Philadel phia.

This excellent book is essentially a new work, rather than a revision. The author takes the very commendable view that "the present separation of laboratory and ward is an evil which cannot be too strongly condemned" and that "the one who takes the history of the patient and makes the physical examination is the only one who can interpret correctly the laboratory findings." Thruoghout the book the idea is foremost that the function of the laboratory finding is to illuminate the case under study. The style is very pleasing, and what we might call the human element predominates. An occasional illustrative case history is introduced. The chapter on blood is very full. The descriptions of non-surgical biliary drainage and Vincent's Angina are interesting, although, the latter is somewhat disappointing. This volume is to the laboratory worker what the author's excellent "Essentials of Medicine" is to the nurse.—W.E.V.

Collected Papers of the Mayo Clinic, Rochester Minn. Edited by Mrs. M. H. Mellish. Vol. VIII, 1920. Published Sept., 1921. W. B. Sanders Co., Philadelphia and London, 1921. Price $12.00.

The Practical Medicine Series, comprising eight volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A.M.M.D. Professor of Physical Diagnosis in the Northwestern University Medical School.

Nervous and Mental Diseases, Vol. VIII. Edited by Peter Bassoe, M. D., Associate Professor of Nervous and Mental Diseases, Rush Medical College, Series 1921. The Year Book Publishing Co., 504 S. Dearborn St., Chicago, Ill. Price of one volume $1.75; series of eight volumes $12.00.

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS, M.D., Editor.
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Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

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POLIOMYELITIS

Those physicians who have been so unfortunate as to see patients suffering with this disease will never forget the symptoms presented and so recognize it early in its course.

To see these children limping along with shrunken and useless extremities, using a crutch or cane is heartrending. Whether or not one becomes crippled depends to a great extend upon the early recognition of the malady and its prompt treatment with conscientious persistent and prolonged after care. A realization of the long period of rest and quiet that is needed, if we would have them recover with the usefulness of the affected extremities restored to greater or less degrees, is imperative.

It is true that there has not been an epidemic of this disease since 1916, still more than the usual number of cases were reported last year. While Poliomyelitis may occur during any season of the year, it is more common during the summer.

Remember the early symptoms of

headache, elevation of temperature, vomiting, etc., may closely resemble those of gastro-intestinal disturbance. There may be pain and stiffness of the neck and back. While these may all be present in cases of "stomach trouble" and "indigestion" it is safest to be on guard and keep other children away from these patients until one is sure.

Not all cases will show paralysis but in those who do it usually has appeared within the first week after the onset of symptoms.

So again, let us be on our guard.

MAN MADE MALARIA

The task of eradicating malaria, has been made doubly hard by the continual creation of fresh mosquito breeding spots by impounding water either intentionally or unintentionally—for instance, in the course of highway or railway construction. Owing to this a considerable portion of the malaria in the country may be termed "man-made." Assistant Surgeon General Carter, for instance, found that probably three-fourths of the malaria in a district in eastern Virginia came from such artificial pools and swamps.

Man-made malaria is of special importance at present because of the recently enacted federal highways act, which provides many million dollars for building additional good roads in the south. The specifications require that the culverts on these roads shall be so placed that they will completely drain all wet areas above the culvert entrance and that all borrow pits or excavations made along the roadways shall be filled or properly drained. Many Southern States have enacted laws of similar purpose.

It is of the utmost importance to the public health that these State laws and Federal regulations shall be faithfully observed while the roads are being built, for at that time adequate drainage can be had with very little, if any, additional cost; whereas if through carelessness or wilfulness the culverts are placed too high or the borrow pits are not properly drained the expense for later rectification may be very great.

The State highway engineer of Alabama recently strongly appealed to all State and county engineers and road officials to co-operate in carrying out these laws and regulations. Every community in the South should take particular interest in this subject and all good citizens should promptly report the whereabouts of any such disease-breeding spots that are being created in their vicinity and should insist on their eradication. Not to do so will inevitably mean more mosquitoes and more malaria about their homes.

No road, however necessary for travel, can be called good if it interferes with proper drainage.

SAFE WATER FOR CAMPING PARTIES

Now that spring is really here one's thoughts naturally turn towards outgoing, camping and automobile trips. Careful preparation is usually made in advance for these excursions in order to have them as pleasant and comfortable as possible. The right sort of clothing, cooking utensils and good things to eat are provided, but very often no thought is given to the water supply to be used for drinking and cooking, yet nobody can get on for a day

without water to drink. It is generally felt that water can be secured almost anywhere. That may be true as to quantity but safe water is not always to be found when one wants it most.

With the ever increasing number of campers, fishermen and hunters, there is a corresponding greater chance for the pollution of streams. For this reason surface waters (waters from streams and ponds) can not be considered, safe, as they are always subject to more or less contamination. Even springs may be polluted by careless and thoughtless campers. For this reason it is safer to carry a supply of water from home if one is to be away only for a day. This, however, can not be done if the camping trip is to be of much longer duration. For the longer trips we should look carefully into the sources and sanitary surroundings of the water supply we are to use for drinking. One should not take it from any well he may happen to find, nor should he dip it from a brook or stream under the impression that clear sparkling water is certainly safe, for with water as with persons, looks are often deceptive. Water may look and taste good and yet be badly polluted with the germs of typhoid. One well in New York last year caused over 60 cases of typhoid, some of them being in widely different localities. The water tasted good, but a big rain washed pollution from some shacks into it. Automobilists and others drank it and developed typhoid.

So, try to get water from springs quite distant from dwellings and camps, especially from lumber and construction camps. When in the least doubt about the safety of your water supply boil enough for the day over your camp fire. Boil it five minutes, place the jug containg it, which should be well stopped, in a cold stream to cool. Then carry this supply with you and use no other.

When you find a really safe spring, take good care to keep it clean, not only on your own account, but for the sake of others who use it. Instead of dipping a bucket or other vessel into the basin of the spring, collect the water at the outflow even if a pipe or trough has to be constructed. Waste water should not be thrown into the spring or dumped on the ground nearby and all other wastes should be buried at a depth of about 12 inches below the surface of the ground and at a place lower than the level of the spring. For this purpose a shallow trench should be dug at a safe distance from the camp and the water supply, and as soon as the wastes are deposited in the trench they should be covered with soil to a depth of six or eight inches. This is a safe and sanitary way to dispose of wastes, and it protects both the camp and the water supply.

Never drink water from a well without first making sure that it is so located and constructed as not to be subject to pollution. See that the well does not receive the drainage from privies, barn-yards, cess-pools or pigpens and neighboring brooks, and before using water from the well, make sure that it has a watertight cover which is in place; that it is provided with a suitable pump and that the casing of the pump is watertight. Water should never be drawn from an open well in the old-

fashioned bucket. If there is any question as to the purity of the water we say again, boil it for five minutes and allow it to cool before drinking it. Although boiled water may not be as pleasant to the taste as water that has not been boiled, it is much safer. The insipid taste of boiled water is due to the oxygen in the water having been driven off by boiling. By stirring the water vigorously air is re-introduced and the original taste restored.

It is earnestly requested that at least fifty members send to the editor their copies of the April issue, after they read them.

STATE AND GENERAL NEWS

Dr. C. S. Fortney and Dr. Mary Fortney of Hundred, are doing postgraduate work in New York.

Dr. H. G. Tonkin, Republican candidate for the Mayoralty of Martinsburg, W. Va., was elected by quite a nice majority. Dr. Tonkin is known to fame as a former star pitcher for the Washington American League team.

It is announced that Dr. Rudolph Ruedeman, Jr., formerly with the Mayo Clinic has opened offices in the Lewis Arcade Building, Huntington, W. Va., for the practice of Dermatology and Syphilology, X-ray and Radium Therapy. Dr. Ruedeman came here from Albany, N. Y.

Dr. F. F. Farnsworth, formerly of Buchannon, and who has been connected with the State Health Department at Charleston for the past ten years, has resigned as a director in a bureau of that department, owing to ill health, and has gone to the Mayo Clinic at Rochester, Minn. Dr. Farnsworth's future plans depend upon the success of his treatment at the Clinic.

Dr. J. A. Guthrie and Dr. W. E. Neal, who have been in Cincinnati for the past several days attending the Ohio State Medical sessions, have returned to Huntington.

Dr. M. Virginia McCune Rossa died suddenly at her home at Martinsville, W. Va., on the afternoon of May 15th. Dr. Rossa was 63 years of age, and has for years been in charge of the Shenandoah Valley Sanitarium at Martinsville. She was a graduate of the Hunter McGuire school for nurses of Richmond, Va., and also of the Women's Medical College of Philadelphia.

The engagement has been announced of Miss Virginia Berkley Sutherland of Washington, D. C., daughter of Senator and Mrs. Howard Sutherland, to Dr. George Marshall Lyon of Huntington, the wedding to take place the 24th of June at the bride's home in Elkins, W. Va. Dr. Lyon is the son of Mrs. Harriet Lyon and is a specialist in children's diseases.

Dr. James S. Klumpp has opened offices at 404-406 Lewis Arcade Building, Huntington, W. Va., Dr. Klumpp has, for the past two years been connected with the Guthrie Hospital, and is a graduate from the college of medicine at the University of Michigan.

Dr. A. R. MacKenzie, for the past six years a member of the staff of the Huntington State Hospital, has resigned effective June 20th, and will have offices in the new Holswade Building on Eleventh street. Prior to taking possession of his new offices, Dr. MacKenzie is to take

special work in roentgenology at the John Hopkins University at Baltimore, and is also to study this subject in New York and Philadelphia, returning to Huntington the latter part of August for the exclusive practice of X-ray diagnosis and X-ray Therapy.

Four diplomas will be awarded by the Chesapeake & Ohio Hospital at the graduation exercises to be held at the hospital in Huntington on the evening of June 12th, the graduating nurses being Clarice Carmen Beall, Augusta Rhea Carnes, Ethel Fay Ellis and Kathleen Mavourneen Tyree. Diplomas will be awarded the four nurses for successful completion of three years of training, and will be presented to the class by Dr. R. J. Wilkinson, Surgeon in charge of the hopital, while class pins will be presented them by Dr. W. E. Vest. The graduation address will be delivered by Dr. S. Roger Tyler, pastor of Trinity Episcopal Church of Huntington.

Dr. W. E. Vest, chief of the medical department of the Chesapeake & Ohio Hospital at Huntington, W. Va., recently attended the Commencement Exercises of William and Mary College at Williamsburg, Virginia. At the meeting of the General Alumni Association Dr. Vest was elected president of the Alumni in his Alma Mater for the ensuing year.

May 10, 1922.

Editor W. Va. State Medical Journal
Charleston, W. Va.

Dear Sir:

I am opposed to a four-year medical school for the following reasons:

1. There is no shortage of physicians in West Virginia, or any other state. Every town of any size is well supplied with physicians. Write almost any physician in the State and ask him if there is an opening in his community and he will almost invariably tell you of another place that is much better.

2. Because a physician graduates in West Virginia is no assurance that he is going to practice in this State or that he is going to the rural communities. Thirty-one states have class "A" schools, they have not solved the rural community problem. It will not solve ours.

3. The education of more men in medicine is not going to solve the rural community problem. You cannot expect a man to spend thousands of dollars and years of study and then to be satisfied with a mere existence in some isolated community.

4. I believe the best solution of the rural problem is for each community to guarantee its physicians a stipulated income. Almost any rural community can get a physician if they will guarantee him a decent income. I would not locate in some of the rural communities if I were educated gratis.

5. There are plenty class "A" schools in the United States. Most of these schools are endowed by wealthy men. They may be a resident of New York or any other large city, yet derive their wealth from this state.

6. West Virginia is not the only state not having a four-year school. If every state assumed this attitude we would be back to the days when the A. M. A. began its fight to clean up the surplus medical schools

7. There is no city in the state large enough to supply the clinical

material necessary for a class "A" school.

8. To properly maintain a class "A" institution is expensive. Our taxes are high enough.

HARRY H. BOLTON.

The following members and guests were registered at the meeting in Huntington:

H. G. Nicholson, Charleston; Robert A. Ashworth, Moundsville; J. A. Campbell, Beckley; J. E. Coleman, Beckley; J. Howard Anderson, Marytown; H. G. Steele, Bluefield; W. T. Highberger, Marysville; D. P. Cruikshank, Lumberport; E. T. W. Hall, Not given; R. H. Dunn, Charleston; W. H. Wallingford, Princeton; Rush F. Farley, Burch; W. P. Black, Charleston; W. S. Fulton, Wheeling; G. A. MacQueen, Charleston; Walter C. Swann, Huntington; Henri P. Linsz, Wheeling; Harry M. Hall, Wheeling; T. M. Hood, Clarksburg; A. P. Butt, Elkins, C. S. Smith, Beckley; N. R. Price, Marlinton; P. D. Barlow, McMechen; W. A. McMillan, Charleston; W. P. Bonar, Moundsville; C. H. Maxwell, Morgantown; M. B. Williams, Wheeling; Chas. G. Morgan, Moundsville; C. R. Ogden, Clarksburg; B. F. Hardere, Wellsburg; S. G. Moore, Elkins; Edwin McDonald, Logan; O. P. Wilson, Moundsville; Harry Silver, Wheeling; Jas. R. Bloss, Huntington; Roy Ben Miller, Parkersburg; B. Sam'l Rankin, Tunnelton; L. H. Forman, Buckhannon; J. E. Rader, Huntington; R. H. Walker, Charleston; M. V. Godbey, Charleston; J. A. Guthrie, Huntington; S. R. Holroyd, Athens; Walter E. Vest, Huntington; John E. Cannaday, Charleston; W. R. Hughey, Charleston; S. B. Lawson, Logan; C. W. Waddell, Fairmont; C. B. Wylie, Morgantown; W. B. Stevens, Eckman; R. A. Salton, Williamson; H. H. Farley, Logan; B. B. Wheeler, Beckley, V. T. Churchman, Charleston; Frank Le Moyne Hupp, Wheeling; A. H. Grigg, Beckley; C. T. St. Clair, Bluefield; Glen Johnson, East Lynn; H. S. Lane, Nitro; J. W. DeVeber, Ronceverte; H. L. Goodman, McKendree; L. R. Harless, Glen Ferris; L. S. Henley, Fayetteville; H. E. Slone, Clarksburg; D. A. MacGregor, Wheeling.

C. R. Madden, Charleston; Oliver D. Barker, Ralph H. Boice, Parkerburg; W. H. McConley, Sutton; Robert J. Reed, Wheeling; Harry E. Coffman, Keyser; A. J. Watts, Huntington; Howard F. Phillips, Wheeling; C. A. Martin, Amherstdale; B. F. Harden, Wellsburg; Thos. E. Peery, Bluefield; Della J. Beasley, Birmingham, Ala.; R. H. Pepper, Huntington; L. N. Hanes, Wheeling; A. T. Post, Clarksburg; R. M. Bobbitt, Huntington; A. L. Peters, Fairmont; Robert K. Buford Charleston; Everett E. Watson, Salem, Va.; Mrs. Everett E. Watson, Salem, Va.; E. A. Hall, Clarksburg; G. L. Pierce and Mrs. G. L. Pierce, Elkins; C. A. Ray, Charleston; Oscar B. Biern, Oscar F. Hines, Huntington; A. W. Adkins, Huntington; J. H. Steenbergen, Huntington; H. L. Kirkpatrick, Deegans; G. G. Irwin, Charleston; H. H. Haynes, Clarksburg; Ira J. Haynes, Richmond, Va.; Wm. D. Hereford, Nellie Yost, A. J. Sweezy, John R. Keesee, I. W. Mayberry, George M. Lyons, D. J. Cronin, J. Clark Killey, J. S. Klumpp, Huntington; John A. Simpson, Morgantown; A. L. Gray, Richmond, Va.; Guy Yost, Hunting-

ton; J. W. Skaggs, Nitro; Chas. L. Parks, Fairmont; C. M. Hawes, Huntington; F. O. Marple, Huntington; C. H. Malcolm, Huntington; G. C. Morrison, Huntington; A. C. Belcher, Huntington; R. Ruedeman, Huntington; J. W. Rife, Kenova; H. B. Madden, Huntington; E. S. Goff, Spencer; A. J. Pickering, Huntington; C. S. Ford, Huntington; J. C. Ford, Huntington; L. F. Boland, Williamson; F. E. Brammer, Cincinnati, Ohio; I. R. LeSage, Huntington; H. A. Brandenbury, Huntington; E. D. Wells, Huntington; W. Bird Hunter, Huntington; D. P. Crocket, Big Creek; J. E. Hubbard, Huntington; Mrs. R. B. Miller, Parkersburg; P. H. Swann, Huntington; Mrs. E. S. Goff, Spencer; E. A. Goff, Spencer; C. E. Grim, St. Marys; F. A. Gardella, Huntington; G. L. Taylor, No address given; E. G. Smith, No address given; E. W. Horner, No address given; L. T. Vinson, Huntington; C. G. Willis, Huntington; B. L. Hume, Huntington; F. C. Hodges, Huntington; J. H. McCulloch, Beckley; A. K. Kessler, Huntington; W. J. Judy, Belleville; Wm. S. Robertson, Charleston; Carl F. Raver, Charleston; J. C. Kessler, Huntington; R. J. Widersere, Huntington; E. N. Miller, Huntington; I. W. Taylor, Huntington; W. R. Long, No address given; C. N. McClintic, Williamsburg; B. D. Garrett, Kenova; W. T. McClellan, Ethel; A. P. Gibson, Huntington; J. B. Lawson, Huntington; Chas. O'Grady, Charleston; G. V. Capito, Charleston; J. W. Love, Huntington; Mark Sutphin, Huntington; C. W. Hartford; Wm. F. Beckner, Huntington; A. G. Bowles, Glen White; Chas. Bryan, Huntington; M. B. Moore, Huntington; Arthur S. Jones, Huntington; J. W. Kincaid, Catlettburg, Ky.; W. T. Owens, Clarksburg; W. S. Rowan, Logan; C. J. Boerman, Cincinnati, Ohio; T. J. Moore, Affinity; H. D. Hatfield, Huntington; E. Bennett Henson, Charleston; F. P. Weltner, Charleston; Wm. A. Thornhill, Charleston; S. D. Wise, Parkersburg; W. W. Dye, Grantsville; J. H. Thornsbury, Crites; J. M. McConihay, Charleston; C. L. Holland, Fairmont; R. D. Roller, Jr., Charleston; B. S. Preston, Charleston; G. H. Phillips, Charleston; Cincinnati, Ohio; O. N. Hare, Bluefield; Cha. E. Munson, Columbus, Ohio; G. H. Gray, Columbus, Ohio; J. W. Haynie, Columbus, Ohio; J. W. Lyons, Holden; K. M. Jarrell, Beckley; J. H. Hoskins, Beckley; Harriet B. Jones, Glendale; A. A. Lilly, Charleston; R. Hardwick, Huntington; G. Putnam, Charleston; C. M. Ramage, Fairmont; Wirt B. Wilson, Charleston; N. E. Steele, Logan; G. H. Barksdale, Charleston; Anna M. Trimble, Huntington; M. A. Dowler, Glendale; L. C. Morrison, Milton; C. H. Morris, No address given; W. H. St. Clair, Bluefield; Theo. R. Diller, Pittsburgh, Pa.; Jas. F. McHoughlin, Charleston; J. W. Duff, Charleston; T. E. McGuire, Charleston; E. E. Shafer, Huntington; Robert Wriston, Beckley; W. E. Neal, Huntington; W. M. Dickerson, Logan; C. W. Warnock, Huntington; J. T. Baker, Huntington; C. D. Brinker, Wheeling; Joe L. Overton, Parkersburg; Louis Grippin, No address given; H. L. Goodman, McKendree; L. R. Harless, Glen Ferris; R. A. Ireland, Charleston; G. C. Robertson, Glen Ferris; C. E. Gabel, Glen Ferris; R. J. Shultz, Charleston; M. B. Smith, Beckley; J. H. Hans-

ford, Pratt; H. B. Robbins, No address given; H. V. Lusher, Huntington; M. H. King, Charleston; H. L. Robertson, Charleston; Walter W. Point, Charleston; R. S. Sherratt, New York City; C. A. Pryor, Huntington; W. H. Cunningham, Blue Jay; F. E. Evans, Huntington; S. J. Richards, Charleston; F. A. Fitch, Huntington; C. F. Hicks, Huntington; Thos. W. Moore, Huntington; C. T. Taylor, Huntington; I. Clay Hicks, Huntington; G. P. Walker, Huntington; Karl C. Prichard, Huntington; Edward E. Rose, Huntington.

W. C. SWANN, Secretary.

The dates for the next two examinations of the National Board of Medical Examiners are as follows:

Part I and II, June 19, 20; 21, 22 and 23, 1922.

Part I and II, September 25, 26, 27, 28 and 29, 1922.

Applications for the June examination should be in the Secretary's Office not later than May 15th, and for the September examination not later than June 1st. Application blanks and circulars of information may be had by writing to the Secretary, Dr. J. S. Rodman, 1310 Medical Arts Building, Philadelphia, Pa.

Dear Doctor:

Owing to ill health Dr. Farnsworth, who has so ably administered the affairs of the Bureau of Venereal Diseases since its establishment, has found it necessary to resign as its director, his resignation taking effect May 1st. You have doubtlessly received notification of this.

As a temporary arrangement, the Commissioner of Health has appointed the writer Acting Director in Dr. Farnsworth's place, a position he will fill until a new director is definitely decided upon. In the meanwhile, it will be attempted to carry on the work of the bureau as efficiently as it has been done in the past. If we can be of any service to you whatsoever, we hope you will write us.

Very truly yours,

WILLIAM S. ROBERTSON,
A. A. Surgeon,
U. S. Public Health Service
Bureau of Venereal Diseases,
State Department of Health.

The West Virginia Medical Journal

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THE PRESIDENT'S ADDRESS TO THE WEST VIRGINIA MEDICAL ASSOCIATION, DELIVERED AT THE 55TH ANNUAL SESSION, HELD IN HUNTINGTON, W. VA., MAY 17th, 18th, and 19th, 1922.

Members of the West Virginia Medical Association, and Visitors:

Not long ago I was a witness in the circuit court of Kanawha County, West Virginia, in behalf of a fellow surgeon, who was a victim of a malpractice law-suit.

At the conclusion of my testimony, when I was turned over to the plaintiff's attorney for cross-examination, this attorney asked me if I was a member of the Kanawha County Medical Society.

I answered in the affirmative.

He then asked me if this Society had any relation to the West Virginia Medical Association. I answered that it was one of the component societies that made up the West Virginia Medical Association, and that the West Virginia Medical Association likewise was a component of the American Medical Association.

He then asked me in a cynical manner, what the purpose and objects of these organizations were.

It was with extreme pleasure that I was able to answer that these societies represented a large body of the most highly educated, refined, and self-sacrificing citizens of the country; that they were men of altruistic ideals, and represented the ablest and strongest men and women in the medical profession in our land; that they had bound themselves together in these societies and associations, for the primary purpose of the strongest possible co-operation in the chief object of this great body of scientific people, namely, the study and advancement of the science of prevention of disease, prolongation of life, and relief of suffering among the human family.

I most sincerely thank the mem-

bers of this Association, who have conferred this great honor upon me.

I must confess that my appreciation and my pride upon this occasion are beyond my ability to describe. It is truly a great honor. God help me, that my future life in our profession may prove that your confidence is not misplaced.

Colleagues in our noble calling, the vigilant eye of the human family is constantly upon us.

As a passenger upon a great steamship trusts the pilot and the captain to guide him safely into harbor, so the well and the healthy are trusting us to guide them safely by the hazards of pestilence and preventable disease.

The stricken are appealing to us with the implicit confidence of the infant in its mother.

The state is trusting us for the advice that will preserve and produce a healthy citizenship.

God is trusting us with His unborn human family.

Men and women, we have assumed responsibility, but it is not discharged honestly and ably without reward.

I review the record of the West Virginia Association in the last twenty years upon its work in preventive medicine with a great deal of pride.

Much has been accomplished along these lines, which time will not permit me to enumerate here, but let me remind you that this Association has initiated and fostered all of it. We have suffered many defeats at the hands of politics and ignorance, and so it will always be, but the soundness and unselfishness of our purpose gives the blood of life to our perseverance, and truth and light will eventually triumph.

There is much work not begun, and much left unfinished along this line yet before us, and it will continue to grow heavier as the complexity of our civilization increases.

So, it remains for us to become stronger as the burden grows heavier.

The prolongation of life, and the relief of suffering, especially the latter, brings us back to a discussion of the chief subject of our work, THE PATIENT.

It is the PATIENT, our sick brother, who was the primary reason for the creation of our profession, and is the chief reason for its existence today.

Our profession exists in its present trusted and dignified position because of the confidence that the patient has in the promises we make him, and the extent to which we have kept these promises.

We, as doctors, all promise our patients that we will do all that the light of modern medical science has taught would be beneficial in saving his life, restoring him to health, and relieving his suffering, taking into consideration the environment in which we find him.

There are a few things that we, the trusted, and the basis of the patient's hopefulness, can always do in any environment in which we find ourselves.

First, we can answer his call, competent to advise him properly. With the present day opportunities for a phyician to be REASONABLY well-trained, there is no excuse for anyone's offering his services as a doctor, if he is incompetent to advise a patient properly.

A most valuable part of a doctor's training is a conscience, based upon the golden rule that will make him hesitate long enough to ask himself, "What would I have this patient's action toward me be, were I in his place, and he in mine?"

If we ask ourselves this question honestly and unselfishly, our conscience will invariably answer us correctly, and in our patient's best interests.

We will most carefully examine him, using all available aids from every available course, to endeavor to arrive at a correct diagnosis.

The best and most intelligent advice and procedure will be employed to restore him to health if possible, and if not, then to relieve his suffering and prolong his life to the utmost of our ability.

If helpful consultation with other men in our profession may add to the work of the doctor in charge, that doctor should promptly and frankly tell him. We should deal conservatively and frankly with the patient under all conditions and upon all occasions. Due consideration should always be given to the patient's environment, and his financial ability to comply with our advice and prescriptions.

The utmost confidence of the patient should be merited beyond doubt, and sought relentlessly.

I might mention other obligations of the doctor to his patient, and elaborate on those already mentioned, but if these few principles are kept in mind, and lived up to, to the full extent of an honest man's ability, there will be less radical surgery done by the able and ambitious surgeon who has his heart set on selfish distinction.

There will be less surgery done by the untrained and incompetent doctor, who is ambitious to do surgery, but who has not the courage and conscience to properly prepare himself for the work, before he thrusts himself upon the confidence of his sick neighbor and fellow man.

The surgeon will see fewer cases of peritonitis resulting from the treatment of acute appendicitis and kindred conditions with purgatives and ice-caps, by some tenacious physician, for days after a diagnosis should have been made, and surgical treatment advised.

And so I might continue to call your attention to our weaknesses most of which are carelessness or hypertrophied ambition, but I must be brief.

At this point, however, let me drop a hint, a word of warning. Are there not those among us who have had sufficient experience to cause us to look back upon our own youthful years in the profession, and observe the work of the beginner with a measure of sympathy, both for him and for his patient?

That we are prone to a weakness equally as great, if not greater, is manifest in the fact that unless we are constantly on our guard, we will find ourselves relying upon our experience, for a short cut to a conclusion, at the expense of the careful examination to which our patient is entitled.

Clinical experience is of untold value to the doctor who has not allowed his thoroughness, and keenness of observation to deteriorate as the years roll by, and the gray hairs steal in.

Fellows, lest we grow old to be gladly forgotten, may we here and

now renew our vow to our PATIENT. May we firmly resolve and ever pray that we may be remembered as men always trusted, because we were competent, conscientious, charitable, and last but not least, real men.

No profession and no class of men have a greater opportunity to be so remembered and so revered by our fellows. Let us all live and act toward our brother that we merit righteously, the trust and confidence with which we are implicitly baptized by our fellows and neighbors. Let us join together to destroy the "Tares." God grant that the survivors of our profession may be "Wheat."

This the laity trusts us to be, and we should honor the confidence or refuse the trust.

When I think of my obligation upon this occasion, and the fact that I must follow a custom and address you, my respect and kindly feelings for all of you make me ask myself what would be the most appreciated. In consideration of many years of experience in attendance at these meetings, the value of our limited time, and the realization of my inability to cast a pebble that would change the current of a stream, make me decide that my most valuable tribute would be brevity.

Many things of interest to the members of this Association come into my mind at this time, and I want to call your attention briefly to a few of them.

Our profession is distinctive, and bows only to that noble, self-sacrificing profession that is ordained by the Christ to care for the souls that occupy these mortal bodies to which we are ministering.

Through unselfish service to our fellow-man we enjoy this distinction and social position. Let us improve and add to our "talents" by lending every assistance to our Public Health organizations, both collectively, and as individuals, wherever our field of activity may be. We now have a good workable Public Health code in West Virginia. It still needs some refinements, but they will evolve with little effort on our part from here on, if the Medical Profession will put a firm and friendly shoulder to the wheel behind our Public Health Council, and our "Old Abe Lincoln" secretary, Dr. Henshaw.

I want to take this opportunity to say that I think West Virginia is to be congratulated on having as the executive officer of her health department, a skilled and efficient man, who is above allowing politics to enter his mind in connection with the discharge of the duties of his high office.

He is going right, and reflecting credit upon his office and our profession. Let's help him, every one of us.

I can't understand why he is not a Democrat. I presume if he were, he would not be our health officer.

Anyway, that leads up to a discussion of an ideal of this Association, and that is, that one of our next big problems and duties is to show the public and politicians what a loss the state is sustaining when politics is allowed to enter into our health department, or the personnel of our state institutions, which are created primarily for the discharge of our public obligations to the weak, the afflicted, and the

helpless of this commonwealth.

They are the wards of the state. Our state is the trustee. Is there anything more disgraceful before our laws, or before our God, than an unfaithful trustee?

We have in our state three institutions for the care of our insane. We should have only one.

It should be centrally located, and be placed in the hands of a highly trained staff of professional men, who are equipped for that particular work.

The staff of that institution could and should consist of men carefully trained in the various specialties in medicine and surgery. They should be men employed by the state for their PROFESSIONAL and not their POLITICAL value.

They should be upon a civil service basis, and not subject to removal except for cause, and that cause should not be vote-getting value or the payment of political debts.

Is there a man in this room who would not be ashamed, or who would not hide his face, if he were confronted with the fact in a way that he could not escape, that he was buying his political position at the expense of these poor unfortunate and afflicted of our people?

Show me a man who has been selected as the head of one of these institutions in the history of this state, by either party, where the first consideration was not the political value to the party in power.

With our faces to the future, is it not largely our fault if these abuses are not corrected?

Our pleas for help for these people will be answered, if only we will raise our voices and make the public hear us.

We have much to do, and our achievements in West Virginia in the twenty years should give us courage and entrench our confidence in our people, if only we will take them into our confidence.

The facilities for the care of our tuberculous citizens should be extended.

Whether our present state sanitarium should be enlarged or another established, is a question that should be studied by a joint committee of doctors and political economists, aided by our agricultural department.

Our Governor's attention should be called to this urgent need in his state, and he should be professionally and intelligently prepared to recommend the proper relief measures to our next legislature in his message.

He may need our help, and we should offer him our services sincerely and gratuitously.

In my opinion, the three so-called "miners" or state hospitals, as they are at present run, are not essential to the infant industries as they were when they were established.

At the present time, and under their present legal status and management, I think that they are institutions that are being maintained by the state chiefly for political reasons; that they are unfair competitors of the private hospitals of West Virginia; and that they are the means of discriminatory and unfair taxation on other portions of the state, in favor of their immediate respective localities.

I think they should either be sold or leased by the state to private individuals or municipalities, who

would operate them as private or local municipal hospitals. Or the state should opreate them strictly on a benevolent basis in behalf of some class of our indigent citizenship, such as crippled and deformed children; and if so, equip them to operate efficiently in that capacity.

On the other hand, the state should go into the hospital business on such a scale that it could supply the entire needed hospital facilities for the whole state.

At the present time, the state is caring for the accidents in the immediate vicinities of these hospitals that should be cared for through the State Compensation Commission, at the expense of the employers, while in localities not in reach of such state institutions, the employer is carrying his own burdens, as was contemplated by law, and charging the expense of the same to his production cost.

As it is, the state is taxing the man who is out of reach of the state hospital to maintain an institution to discriminate in cost of production of a similar product.

It is vital that our compensation law be amended, and the limit of $300.00 for the "primary treatment of any case" removed.

We have all seen cases in which $300.00 would not pay the actual cost to a hospital for hospitalization. In such cases, the hospital loses actual money, and some doctor renders an unreasonable amount of free services, which by any standard of right and wrong, should be paid for.

There should be an all-time Medical Director on the staff of the State Compensation Commission, who would devote his entire time to this work, and pass on all professional phases of the work of the Commission. It is not being so handled at the present time, and much of the injustice and many difficult problems, both of the doctors and of the Commission, could and would be eliminated if this addition were made.

We should at this meeting render our final judgment on the question of a four year's medical course for West Virginia at this time.

We should here outline and agree upon our entire legislative program to be advocated before our next legislature thoroughly prepared to carry it out.

We ask for nothing selfish. Why not insist upon an agreed program and realize its completion?

I think we all look forward to the meeting of our State Association as a few days of mirth, pleasure, and social concourse with our fellows whom we have learned to love as we know them better.

It seems too bad that we must convene at this time, each of us with a mark of mourning on his heart because of the passing from among us of our beloved Dean of this Association, Doctor S. L. Jepson, of Wheeling, who died since our program went to press.

I do not feel competent to extol his virtues, or enumerate his many contributions to the profession and to this Association. I now therefore appoint Dr. Robert J. Reed, Dr. Frank Lemoyne Hupp, Dr. Henri P. Linsz, Dr. J. E. Rader, and Dr. J. Howard Anderson, a committee to draft appropriate resolutions to express the high regard of this Association for Dr. Jepson, and also our sympathy for his bereaved family

and friends.

In closing I have but one anxiety. Have I measured up to the expectation of my friends in this Association, who so generously elected me to this position of trust and high honor in my chosen profession? If my efforts in the administration of the affairs of our Association up to the present time have been a disappointment to you, nothing that I might say now and here, would be an adequate excuse or an appreciated apology.

I wish to express to each and all of you, my most sincere appreciation for the honor that you conferred upon me.

As compensation, I pledge my support in the future to all of the best interests of our Society, in any way that I may be of service.

RESPONSE ON BEHALF OF THE STATE ASSOCIATION BY DR. C. A. RAY, CHARLESTON, ANNUAL MEETING, HUNTINGTON, MAY, 1922.

Mr. President, Mayor Campbell, Dr. Bloss, Fellows of the West Virginia State Medical Association, Ladies and Gentlemen:

I had thought of a great many nice things to say about Huntington, but the Mayor and Dr. Bloss have crisscrossed me in so many places that I scarcely know where to begin. In fact, since hearing these gentlemen speak, I think we have greatly underestimated the importance of this city and community. However, I want to assure you that I appreciate very highly the honor of being designated by our good President to say a few words in response to his splendid welcome.

Last year when the Huntington society invited the State Society to come here in '22, there was little or no argument. Personally, I like Huntington. I have been here before. In fact, at one time in my career, located and practiced my profession here—for thirty days, and it was no fault of Huntington that I left. I did not remain because I didn't suit the city. At that time, and it has not been many years ago, it was a village, no hospital—Marshall was a high school. Ninth Street and a part of Third Avenue was paved; the Florentine was the big hotel; you could get to Guyandotte once a day by boat and twice a day by the C. & O. Railway, and you had to go to Twentieth Street to get to the cornfields beyond the railroad. The electric line to Ashland was just completed, and the regular schedule was—if the car didn't jump the track you could get there once in a while. As I stood on the corner of Ninth and Fourth this morning watching the traffic of the busy section, I was attracted by the magnificent business houses and hotels and the splendid stores of all kinds, both wholesale and retail. Wandering on up the street, I beheld your imposing public buildings, the court house, the city hall, post office, public library, more hotels, and was astounded at the wonderful improvements which had taken place during these last few years. Then I ascended to the top of one of your sky-scrapers, and as I looked up and down the Ohio as far as my eyes could see, and behold your many suburbs with their various factories and industries that are connected with the main part of the city by electric and steam rail-

ways, churches without number, hospitals in every section — Marshall a real college, and then out over where once the cornfields—I saw wide and expanded streets, beautiful homes, parks and more factories, and one of the best high school buildings in West Virginia. I was not only astounded, Mr. Mayor, by marveled at what the future had in store for Huntington—especially when I remembered that your corporation extends from Russell to a little west of Saint Albans. Then from this vantage point I was struck with the topography of your city. It is not unlike the great metropolis of New York City on Manhattan Island. The beautiful and placid Ohio with its steam boats and ferries passing to and fro, reminds me of East River. The Guyandotte, with its blue sparkling waters as they flow down from the pine-clad peak of Logan and Mingo, its palasaides of red brush and Rhodedendron very well represents the Hudson. You do not have to draw very strongly upon your imagination to picture Four-Pole as the Harlem River in its serpentine course along the south and western border, with factories on one side and beautiful and palatial homes on the mountain side beyond; and then instead of the "Spytin-Dyvil," with the madly rushing and roaring of its in-coming tide and its noiseless quiet and peaceful ebbing, you have an insane asylum and cemetery. And in the forests beyond which, I am told, there are still hot springs whose waters are 190 proof, never cool off, and will put life into a dead doctor, can be used internally or externally, and if any of you want to go out there to try it, see a man by the name of Hawes, referee and promoter of prize fights, all-around sport, and sometimes doctor.

There are many nice things to be said of Huntington, but even these, with what your Mayor and Dr. Bloss have said are true, and we do not question them; fully justifies your claim of the second city of our little mountain state. That reminds me—that we are referred to and call ourselves "The Little Mountain State." I think this is a misnomer. Did it ever occur to you that West Virginia is larger than the State of Texas? Did you ever stop to think that if some great mastodon stood on the top of each mountain peak in West Virginia, with sufficient weight to flatten out its surface, the Shenendoah Valley would be pressed into the sea? All of Kentucky and part of Tennessee would be covered over, and Cincinnati to Cleveland and Pittsburgh would be our north and western boundaries; all of which would be underlaid with ten feet of coal—the Great Lakes would be inland seas of oil—gasoline would be ten cents a barrel for the next hundred years and from the mastodon tracks could be collected enough rattlesnake oil to cure all the rheumatism in Christendom. All of which to my mind, goes to prove an assertion I once heard made "That God never made such a state and peopled it with such people without providing for their posterity," and one of these provisions is the kind and class of physicians and surgeons to be found within our borders, and they are here, Mr. Mayor and Dr, Bloss, to rub elbows and exchange ideas with each other and enjoy your hospitality. They come from the valleys of

the Ohio and Kanawha, from the orchards and pasture lands of the Eastern Panhandle, from the coal fields of the north and south and from the jungles of the Allegheny foothills, from Harper's Ferry and Bluefield. It is not my purpose to indulge in personalities, but as many are strangers among you, I hope I may be pardoned for a few personal references. The flood gate of New River has opened and washed into your midst, the Cooper Shops of Hinton and Hogg-pens of Mt. Hope. Foxy Grandpa, from Bluefield has chartered an N. & W. train and brought in all his bad boys along the line—including Clark and Anderson. From the great city up north, where they had to split the Ohio and roll out some hills to find room to built it, comes a delegation headed by a man whose name I cannot recall, but it has some reference to water, though foreign to his manner of liberality — Caldwell, who has a grievance against certain Huntington individuals and has formed an alliance with the Charleston bunch to make the Huntington crowd pay the expense of this trip. So I warn you when the time comes you want to have your deck marked; Groom your best horse; Beirne incense on your table, Red Pepper under the table and settle your nerves with Viburnum Compound; and if about four o'clock in the morning you hear in the hotel corridor what sounds like a duet by a mocking bird and a jazz band, you will know that musical Henry Linsze is here and has met up with McQueen from Charleston, C. O. Henry from Fairmont and your own Joe Rader. I am told these men were the inspiration to the author who wrote "Dr. Jekyl and Mr. Hyde." The dignified Dr. Jekyl at home, but when they get to a meeting of the State Association, well—a tip. The gentle breezes from the northeast have blown in the Golden Rods from Elkins and Wise men from Parkersburg, and although some of them may appear dumb, you will hear something or have a delivery from one of them before this day is over. With a delegation from our University Town is a giant in intellect, if not in statute—who claims the distinction of being a brother to Mrs. Judge Poffenbarger, but whose name I always associated with an undertaker who has his office in Charleston in the same block with the Kanawha Valley Hospital and Professional Building. Dean Simpson has something up his sleeve and you may expect him to show his hand at any time.

Through modesty and remorse, I pass up all individuals from Charleston. You were all there last year, and I fear this association will be made up of doctors yet unborn before we recover our lost reputation.

I would not have you think we are unmindful enough to overlook some of your own talent and men of prominence. Walking down the street last night, I met a counterpart of W. J. Bryan with his ponderous head, flowing locks and smiling face, and was told he was a former State Senator, Dr. Ira Clay Hicks. You have but few people walking the streets of Huntington crazy, or with an appendix, owing to the numerous Guthries here, who never let anything get away. If you are crazy with your appendix—one of them gets you, and if you are

crazy without it, the other gets you, so watch your step. You have Moore eye and ear specialists than any other city in the State. They may appear as small and insignificant as a cambric needle; however the eye is an important factor in his make-up. One of your doctors, I am told, has been offered a position with the Dun-Kirk Seed Co., because, under his management, twelve months in the year, the West Virginia Journal blossoms like June rose.

A few years ago the State Government of West Virginia, so afflicted with rickets, curvature of the spine and sub-luxation of joints that the people had to go down to McDowell County to get a bone specialist to straighten it out, and who would dare say that Dr. Hatfield was not one of the best governors West Virginia ever had—even if he did at one time in his political career, try to move the seat of government to Cincinnati. Dr. Hatfield I am sure did the very best he could, but he had to leave in a few callouses and crooks that even Cornwell could not get out. I would be unworthy of this honor if I failed to pay tribute to the good women who make next to the supreme sacrifice in life to become the wife of a doctor. In almost every intance the doctor's wife is the measure of his success. She is the business end of the firm. She may not be able to make a diagnosis, write a prescription, or reduce a fracture, but she knows how to hang on to the telephone and make our patients believe we are awfully busy men, out on calls where she can locate us in a short time, when the truth is we are either asleep, reading the newspaper, or out on a game of penny-ante with some of our doctor friends, and when the phone rings at night, she does not stop short of fabrication. It is a sad comment that doctors' wives are less religious than other classes of women, but what can we expect when we make them just common liars? She is blessed with a man called husband but not a companion. She spends most of her evenings alone; is doomed to disappointment if she wants to go to a show or some social affair and suffers the tortures of damnation if the doctor happens to be a little sick. It will not be a question of reparation but what per cent have we repaid these good women when the time comes for us to knock at old St. Peter's gate. I recall a beautiful tribute to woman by a poet:

"Man fell asleep, and from his side,
Woman in her magic beauty rose,
Dazzled and charmed, he called her 'bride.' "

If I can be assured that the ladies brought no eggs to the room with them, I will repeat the other line:

"Man fell asleep, and from his side,
Woman in her magic beauty rose,
Dazzled and charmed, he called her 'bride,'
And his first sleep was his last repose."

When President MacQueen served notice on me that I was to perform this duty I was very much concerned as to what I should talk about. One of our office friends sitting by says, "I will tell you, Doc, if you want to do that crowd a favor, talk about ten minutes and quit." So I have about three minutes left. I beg your indulgence for a few minutes while I say a few words on a subject of vital importance to the people of West Virginia and the Medical profession specially. A

full term graduate school of medicine as a part of our State University. Naturally, the first question to arise would be—Why a full term graduate medical school in West Virginia? First of all, we already have half of it, Class A and up-to-date. Next, because of the scarcity of doctors outside the cities and industrial sections of the State. In other words, the farming and rural sections are almost without doctors. The population of West Virginia is about 1,500,000 and there are 1500 physicians in active practice in the State, or one doctor to each 1,000 population. Cabell County with a population of 66,000 has 101 doctors, or one to 600, 95 of them in Huntington. Ohio County with 62,000 population, 102 doctors, 95 in Wheeling. Wood County, with 42,000 population, 63 doctors, 54 in Parkersburg. Harrison County with 75,000 population, 98 doctors, 55 in Clarksburg, Salem 10, and coal field 33. Kanawha County, 120,000 population, 160 doctors, 102 in Charleston, 6 in St. Albans, 48 in coal fields and 4 in the farming districts, and so it is all over the State one doctor to every six or seven hundred population in the cities and industrial districts and one doctor to as many thousand in the rural districts. In my own county of Kanawha, with 160 doctors, I personally know of three magisterial districts having a population of over 16,000 where there are only 3 doctors, each of whom cover a territory 12 to 15 miles each way. Clay County, population 12,000, and four doctors. Nicholas County, population 21,000 and 5 doctors outside of Richwood. Calhoun County 11,000 and 6 doctors. I am reliably informed that a section comprising parts of Braxton, Lewis and Webster Counties, with an area of 625 square miles has only one doctor and he is under contract with a lumber company.

Another reason for the scarcity of doctors is the length of time required and the expense of a medical education today. Doctors do not just happen now as they did in my day and time and that of some others of this Association. The standard is such (and do not think for a moment that I would lower that standard) that the young man who would study medicine must spend 4 years in high school, three to four years in the University and four years in medical college before he is prepared. I will say to begin so, that the average young man is 25 to 27 before he earns a dollar. When you come to consider expenes, the young man who leaves High School at 16 to 18 and goes to work on a salary or enter upon a business career is able to pay his own way, but the young man who enters the study of medicine must have eight to ten thousand dollars behind him if he can hope to finish the course and be prepared to practice. If any of you think it does not cost money to educate boys, ask me. I have raised and educated three, however, none of them chose to be doctors. (I presume they were born with more mother wit than their dad.)

The question is asked—why do all the doctors, as soon as they begin to know a little something about the practice of medicine, flock to the cities? This is a rather delicate question for me to attempt to answer, but I am going to give you

my theory. While it is a fact that a great many doctors, after a few years practice in the country move to the cities, it does not follow, by any means, that all good doctors of West Virginia are city doctors and I take this opportunity to say a word in commendation of the hundreds of first-class, prominent, up-to-date physicians in the industrial sections and coal fields of our State. Not all, but a large majority of them are mentally and skillfully equipped for any emergency which may arise. Men, who by hard study, frequent attendances on post graduate courses and keen observation of their clinical material they develop into our very best clinical diagnosticians. On so many occasions, unable to secure assistance and counsel when needed and they do things themselves and become resourceful. Few of them have not been called upon to do high-forceps in some remote location where time was precious and help impossible. They can make a tracheotomy tube out of a goose quill or a crooked alder stock, wash out a stomach full of poison with an oil can and soft catheter and numerous other life saving things too numerous to mention which to a hospital and laboratory trained man would appear impossible, and when one does come to a city he has only to develop a technique to make a good surgeon, and his seeming intuition of things unseen keep the X-ray and laboratory man wondering how he knew when someone opens an abdomen and confirms his opinion. Some of you may say he is throwing bouquets at himself. It is true that I spent more than thirty years at the mine but, as I said before, I started when doctors just happened and I stayed until my entries were all driven to the coop line, pillars drawn, roof caved in and nothing is left but the old mouth as a monument of many victim who gave up their lives because of my having happened.

The young man of today, when he has graduated in medicine, has spent seven to ten years in college and some large city. He has gotten away from customs and environments of the country and small town, and, considering his preparation, time and expenses, he naturally feels that he is entitled to comforts and conveniences in the city. Poverty may drive him to the country for a few years but if he is made of the proper material and has the ambition to succeed and excel he soon recognizes his handicap of being away from hospitals, laboratories and the association of other progressive men in the profession so he decides to move in and you can't blame him much.

With a four year medical course as a part of our "U" will keep our young men at home. They can be educated for a little more than half the expense. They will feel their first duty is due those who have made it possible for them to complete their education and where there is now one young man who chooses our noble profession, there will be three or four. Some one has suggested that the standard would be lowered by the establishment of this college. I do not think any man elected to our Legislature would have the audacity to stand up in our Legislative hall and make such an assertion, unless he be ignorant as an ox, when the teaching and training could be put in the hands

of such men who go to make up this State Association. I hope it will be the pleasure, as I feel it the duty at this time, for the Association at this meeting to start some movement which will finally culminate in the establishment of this college. It can be done and ought to be done. Morgantown may not be able to furnish the hospital facilities and clinical material, but either Huntington, Wheeling or Charleston can comply with all requirements and this association can furnish the faculty. I have authority to say for the profession of Charleston that we are not selfish enough to want it, if in the opinion of those in authority, either of the other cities are more suitable. This is not Charleston propaganda. We have no selfish notions and are behind the movement because of its benefit to our farmers and rural inhabitants and because it will be possible for many young men who could not otherwise do so, to pursue our noble profession and I feel like emphasizing the word "noble" when I recall the beautiful tribute paid to his physician by Robt. Lewis Stephenson, the great writer, who was a long and patient sufferer.

"There are men and classes of men that stand above the common herd, a soldier, the sailor, the shepherd; the artist rarely; rarelier still the clergyman; the physician almost as a rule. He is the flower of civilization. Generosity he has such as is possible to those who practice an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and, what are more important, Herculean cheerfulness and courage. So it is that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing."

REPORT OF THE MEETINGS OF COUNCIL

Tuesday, May 16, 1922, 8:30 P. M.

The Chairman of the Council, Dr. G. D. Jeffers, being unavoidably absent, Dr. H. P. Linsz was elected Chairman pro tem.

The roll was called by the Secretary, and, a quorum being present, the Council proceeded to hear reports from the Councillor Districts.

First District—Dr. C. G. Morgan: "I will report for the lower part of the district. Marshall County last year had 45 members; this year, so far, 41. Marion last year had 60; this year, 60. Taylor last year had 9; this year, 12. The whole District had last year 220 members; this year 226. In the lower end of the District we are in good standing."

Dr. Linsz, reporting for Brooke, Hancock and Ohio Counties:

"Brooke County has 11 members; Hancock, 9, with only one last year. Ohio County has 94, out of a total of 96. Everything goes very nicely up in the First District, and we have smooth sailing."

Second District—Dr. C. H. Maxwell: "In Monongalia County we have two more members this year than ever before. All are paid up. I am Secretary of the Monongalia Society, and also Councillor for the District, and I have been working hard to get my District organized. I sent out 244 autographed letters during the year, to which I received only about 20 answers.

"In Grant County only two men did not belong to the County Society, and the Secretary was going to try to get them to join. I do not know whether or not he succeeded. If he did, it is probably the only county in the State in which every eligible man belongs to the county society.

"This year we advanced the dues in our Society."

Third District—Dr. Chester R. Ogden and Dr. L. H. Forman: "We hand you herewith a Council report of the Third District. The Harrison County Medical Society has had a very good year and has increased its membership. The meetings of the Society have been excellent. Several very active young physicians have been received in full fellowship since our last Annual Meeting. The condition of the Lewis and Upshur County Societies is very good though the membership of these respective societies is not what it should be. There is some little friction among the members of the societies in these two counties, but, however, nothing to be considered unusual. Doddridge County has made no change much in the last year and the same may be said of Ritchie. Braxton County is still doing a little society work. The interior counties of the Third District are far behind in organization. The Councilors who represent the Third District, had hoped to visit these interior counties during the past year looking to the increase in organization, but were prevented from doing so by conditions over which we seemed to have no control. There is much work to do in the Third District and it is to be regretted that such a large territory has been neglected, but while this is the case we feel encouraged in the thought that notwithstanding the present trend of things toward Normalcy, the profession in the Third District has much to its credit and we believe as a whole, is advancing in a manner to cause a feeling of satisfaction."

Fourth District—Report of Dr. G. D. Jeffers read by Dr. J. E. Rader.

Dr. Rader: "The southern part of the District, which I represent, is mainly Huntington. We have about 75 or 80 paid-up members. We have meetings twice a month, with very good attendance, and the interest is splendid.

"Wayne County tried for a long time to have a society, but could not, and they finally decided to come in with Cabell, and joined in a body. Lincoln County has been trying to have a society for about twenty years, but somehow they can not have one. I think it is because it is a rural district, and sparsely settled. They could affiliate with Cabell. Mason affiliates with us, also.

"The northern section of District No. Four is in a splendid condition, while the Little Kanawha and Ohio Valley Society has not increased its membership in the last year, we are in a prosperous condition. Fairly good attendance and good fellowship prevails."

The Secretary: "There are many good men who would like to be affiliated with the State Association, but they have not a component society in their counties, not the strength to have one. I think that we should recommend that they join the closest society. In that way we ought to increase our member-

ship largely."

Fifth District — No Councilor present and no report.

Sixth District—Dr. R. H. Dunn. "I wish to report particularly for Kanawha and Raleigh Counties. Raleigh, I think, is in a very good state. It has about 42 paid-up members, and is one hundred per cent. Kanawha, I believe, has 124. Last year they had 128. Kanawha County is prosperous, and it looks as though we shall have more members this year than last. A great many of our members are new men. There are in Kanawha County quite a number of men who do not affiliate with the Society, and there are also some men who affiliate with other societies which are more convenient.

"For Fayette County I have no report. The Secretary can probably tell you about that."

Dr. Rader moved that the Council send Dr. Jeffers a telegram of sympathy. This motion was carried.

A motion was made and seconded that Doctors Gregory Ackerman, J. M. Schwinn, Robert J. Reed, Henry P. Linsz, and Frank LeMoyle Hupp of the Ohio County Medical Society be made Honorary Members of the West Virginia Medical Association, and that the first two named be made Affiliate Members of the American Medical Association. This motion was carried.

Dr. R. H. Dunn introduced the following amendment to Section 4, Chapter 1, of the By-Laws:

"Any member of a county society and this State Association who has been in good standing for fifteen years and has reached the age of sixty-five shall, upon request of his county society, be entitled to honorary membership without further charge for membership, and shall be entitled to all the rights and benefits of the Association." This amendment was referred to the House of Delegates, it was laid on the table for one day and then unanimously passed.

Dr. Steele asked for a Duplicate Charter for the Mercer County Medical Society, and Dr. Linsz asked for one for Ohio County. The Secretary was instructed to issue these.

A rising vote of thanks was extended to the President and Secretary for their work.

Dr. L. H. Forman offered a resolution in regard to securing photographs of all ex-presidents for an album, which was seconded and carried.

After some discussion in regard to the presentation of badges to all ex-presidents, it was voted to postpone the matter until the next meeting of the Council.

A motion to adopt as a principle the presentation of a badge to each president of the Association was carried, this applying to the present and all future presidents.

Dr. J. R. Bloss, Editor of the Journal, read the following report, which was accepted and referred to an Auditing Committee composed of Dr. C. H. Maxwell, Chairman; Dr. R. H. Dunn, and Dr. L. H. Forman.

May 19, 1922, the Council in regular session assembled have elected Dr. G. D. Jeffers Chairman and Dr. Morgan Secretary.

Executive Committee—Dr. H. P. Linsz, Chairman, Dr. C. R. Ogden, Dr. Chas. G. Morgan.

Editor's Report for 1921, West Virginia Medical Journal

Mr. Chairman and Members of the Council of the West Virginia Medical Association:

I have but little to say in my report to you this year, concerning the affairs of the Journal for the State Association, the Editorship of which you have so kindly entrusted to my care.

The past year has been one in which there has been great worry, and many things to cause irritation. As I said to you at the meeting in Charleston last May, there was a strike of the printers which affected the schedule of the Standard Printing & Publishing Company, which Company was at that time getting out the Journal, until finally we were four issues behind. Gradually we were able to catch up until at the end of the year we were only two issues behind, November and December, 1921 coming out in January and February, 1922.

When I requested bids from the various printing concerns of this city for the printing, binding and mailing of the Journal for the year 1922, the Standard Printing & Publishing Company's figure was $4.95 per page for only 1100 copies with a rate of $25.00 per hundred for additional copies. Gentry Brothers Printing Company bid $210.00 per issue of 1140 copies of the same number of pages of reading matter and advertising, with a charge of $3.75 for additional pages, the Committee of Publication to pay the postage. Because of the change of printers, more or less difficulty was experienced in getting the transfer made of the plates, etc., from the Standard Printing & Publishing Company to the Gentry Brothers Printing Company, and therefore we have been unable to catch up the two issues which we were behind. The copy of the April issue is now in the hands of the printers, and I am endeavoring to secure its publication just as quickly as possible, and hope by the first of July to be caught up.

Concerning the finances of the Journal you will see from the statement which I am attaching herewith that the total cost for printing the Journal, postage fees, supplies, etc., amount to $3334.13. When the final settlement came to be made with the Standard Printing & Publishing Company for the December, 1921, issue, it was discovered that there was a lack of funds amounting to $89.58 to take care of check No. 105, representing this settlesettlement. I personally loaned the Journal $100.00, in order to make this check good, and you will note on the bank statement that there was a balance of $10.42, to the credit of the Journal. It was then necesary for me to write Dr. Nicholson for $500.00 from the Journal Fund to start out the New Year, and deducting check for $100.00 repaying me for loan, made on account of the Journal in the First National Bank, you will see that we began the 1922 issue with a bank balance of $410.42.

Taking into consideration the very high cost of printing the Journal for the year 1921, really at war prices, I think that you may feel very much pleased that we were able to only have to call on the Treasurer of the State Association for $89.58 from the Medical Journal Fund to meet all of our expenses, when we consider that there

were over 1,000 members from each of whim $2.00 was received for subscription to the Journal. Deducting the Editor's salary of $1,000.00, you can see that the Journal Fund was some $900.00 ahead of its total expenses.

I herewith attach financial statement. A few of the cancelled checks have in some way been misplaced. This statement, however, shows the number of check which was issued, and the receipted bills are herewith attached. By referring to the stubs of the check book, you will be able to verify the correctness of these items.

This report is respectfully submitted for your consideration, and investigation by your Auditing Committee.

JAS. R. BLOSS,
Chairman of Publication Committee.

Huntington, West Virginia,
May 15th, 1922.

Dr. Rader moved that the salary of the Editor of the Journal be increased to $1500. This motion was seconded by Dr. MacQueen, and was carried.

House of Delegates

Wednesday, May 17, 1922, 11:10 A. M.

The report of the Secretary was read by him, as follows:

"The West Virginia State Medical Association has been entertained by the Cabell County Medical Society three times, in the years of 1888, 1907, and 1915; and it is now in session here for the fourth time in the last thirty-four years. Cabell County has done her part in the way of entertainment. Twenty years ago there were only eight City and County Societies in the State. Cabell was one of them with a membership of seventeen. The other seven societies were Ohio, Charleston, Harrison, Taylor, McDowell, Jefferson, and Marion. Cabell County now has a membership of eighty-three, an increase of sixty-six. Twenty years ago you were sixth in point of size. Now you are third. Twenty years ago there were two smaller societies in the State, now there are twenty-seven smaller. We, the elected delegates and representatives of the component societies of our State Association, congratulate you on your progress and bring you greetings of good fellowship and cheer from our home societies.

In these twenty years important and momentous changes took place in Medical Association work. In 1902 a much needed and thorough reorganization took place from the American Medical Association down to the County and City units of the Association. It was then that membership in the Component County Society became a pre-requisite in the State Association and American Medical Association and we now have County, State, and National Societies of which we may be proud. Twenty years ago we met in Parkersburg with 111 members present and had 318 members of the State Association. This year we expect 250 to 300 members present and have a paid-up membership of 1011, making us an increase in membership of 630, or to express it in percentages it is an increase of 165%. Then your Treasurer collected $480.91. Last year I turned over to your Treasurer $5012.00.

One interesting feature of that date was the election of delegates

to the State Associations of the State Societies of Maryland, Virginia, Kentucky, Ohio, and Pennsylvania. Another important event of that year was the discussion of the Medical Defense Fund. Dr. W. W. Golden, Secretary at that time, requested the Little Kanawha and Ohio Valley Society to discuss this question and they passed the following resolution: "Resolved, That it is the sense of this Soceity that the State Medical Association should adopt means to protect its members against malpractice suits." This was the beginning of our present Medical Defense Law which increases the value of our membership and gives each member such a sense of security. Since that time many State Associations have adopted a defense law, and just last week I had a request from one of the Western States for a copy of our law.

The year 1921 was begun by sending a letter to each Component Society, asking for regular meetings, monthly reports for our Medical Journal, more members this year, and the prompt payment of dues. When the Chiropractic Bill was introduced into the legislature, fifty letters were sent out asking members to make a united effort to kill the bill. The bill was killed largely by the efforts of Dr. MacQueen. One thousand one hundred and eighteen letters, which included membership certificates mailed to the different Secretaries and a few to individual members, were sent out from your Secretary's office. Three hundred circular letters were sent out to delinquent members the last of June. Later about two hundred letters were sent to members asking for date of birth, graduation, state board of health certificate, and place of graduation. My stenographer-nurse spent eleven days and I spent six days in doing this work and recording it on the County list of members. We also undertook to get a complete list of all the phyicians of the State and got complete lists from thirteen counties. About this time we got word that Dr. Farnsworth was making a directory of all the physicians of West Virginia, so we stopped our work. I regret that we did for the doctor's list was incomplete as he himself later acknowledged though it is a good, commendable effort and is the best list known. I feel yet that this directory should be made. The date the one thousand and eleven members paid their dues was stamped both on the alphabetical and county lists of the Society. Twice each month a list of the fellows who paid their dues was made out and sent to Treasurer Nicholson, the West Virginia Medical Journal, and the American Medical Association. We did this so no one would miss a copy of the West Virginia Journal and in order to establish confidence in the Secretary's office. In other words we wanted to do the work as it came in and to not allow it to pile up on us. As a result we had only two inquiries about the Journal last year and in each case we found it to be a mistake in the name and address given us. Thus you will readily see that the work of the Secretary has become very laborious and requires a great deal of time.

But notwithstanding it is a pleasure to work for the Society under such Presidents as Dr. Anderson

and Dr. MacQueen who have served it so well. It is a great satisfaction to me to be Secretary when the Society goes over the top for its goal of one thousand members which we tried to reach for years.

Last year Kanawha gained 26, Marion 10, and Ohio 9; while McDowell lost 6, and the Eastern Panhandle, Fayette, Lewis, and Mercer each lost 4. Some of the other counties gained 3 or less while some lost 3 or less. In 1917 your Secretary reported that the Nicholas-Webster Society dropped out of existence. Now this Society is functioning and has five members paid up. Last year Dr. Charles G. Morgan, Councilor of the First District, and the State Secretary visited the Tylor County Society, paying their own expense, and tried to help them reorganize and become active but without apparent results for some paid dues early last year to their County Secretary who did not turn it over to the State Secretary till late in the fall. Tyler has turned in no dues this year and some of her members have written me that their Society is inactive and that they do not want to drop out of the State Society and have asked me what to do. I wish the Council would lend strong support to this Society and these worthy members of the State Association. The Braxton, Nicholas-Webster, and Greenbrier Valley Societies need help from the Councilors and officers of the State Association. Hancock County, a former inactive Society, has become active and has elected new officers who are taking an active interest in the work. Eight of them have paid dues for this year. The State Association is active, aggressive, and is still growing. The increase in membership depends more upon the local Society than the State organization. The interest in the local Society depends upon the County Secretary, but every member should see that all their brother physicians who are eligible should be invited to join the Society and be given an application blank. Dr. Charles S. Smith, Secretary of Raleigh County Society, is increasing interest in his local Society by mailing to each absent member a circular letter of the proceedings of the meeting. I commend this plan to the other County Secretaries. The members of the Association should assist their County Secretary by promptly paying dues at the first of the year so as not to annoy him by having to send in dues ten or fifteen times a year. In the last two weeks three Secretaries have sent in dues four times though our constitution wisely provides that all dues shall be paid by April 1st.

Death's icy hand laid heavily upon our Association and removed many beloved physicians from among us since we last met. Ohio County suffered most with six deaths. The Association lost three Ex-Presidents, L. D. Wilson, G. A. Aschman, and S. L. Jepson, all of whom were from Ohio County, and the following members: M. M. Reppard of Tyler County, J. F. York of Cabell, Cyrus F. Boyers of Fairmont, S. W. Varner of Preston, W. W. Dear of Parsons, M. O. Hess of Fayette, W. J. Davidson and R. L. Brown of Little Kanawha & Ohio Valley, R. H. Bullard, E. H. Hildreth, T. H. Meighen, and Reed M. Baird of Ohio, and M. P. Malcolm of Kanawha.

The "boys" of Charleston-on-the-Kanawha royally entertained us. They met us at the train, registered us at the hotels, fed us, and gave us a very elaborte banquet. They gave us all their time and wanted to give us all their money. They sure did entertain us in the Capitol City in a capital way.

For 1922 our records show that 961 have paid dues and $4518.00 has been turned over to Treasurer Nicholson. This is more members than has ever paid dues this early in the year. Doddrdige, Mercer, Raleigh, Ritchie, Taylor, Preston, and Ohio have a full paid-up membership.

Fourteen hundred programs, costing less than two cents each were printed. One thousand eleven were mailed to members. One was mailed to each Secretary of every State Association and to all our invited guests, making 1150 mailed out. Three hundred badges were ordered at thirteen and one-half cents each which is less than we have been paying.

Expressing my appreciation to Dr. Anderson, the present officers and councilors of the Association, and the County Secretaries for co-operation, I beg to file this report with you.

ROBERT A. ASHWORTH,
Secretary.

Dr. Reed moved that the Secretary's report be received and filed, and that the Association express by a rising vote its thanks and appreciation to its efficient Secretary. The motion was seconded and carried.

The President referred the Secretary's report to the Council for an audit.

The following report was read by the Treasurer:

Charleston, W. Va.,
May 13, 1922.

HUGH G. NICHOLSON, Treasurer.

In account with the West Virginia Medical Association.

1921	Dr.	Cr.
May 18, To Cash Balance in Bank	$3,260.39	
June 13, 1921, to May 5, 1922, Received from R. A. Ashworth	4,580.00	
May 10, '22, Received from Simpson & Ashworth for Special Simpson Fund	300.00	
1921		
June 14, by Check Moundsville Journal		6.00
June 27, by Check R. A. Ashworth, Printing		7.00
July 18, by Check Moundsville Echo		11.85
Aug. 15, by Check Jas. R. Bloss, Salary		500.00
Sept. 3, by Check R. A. Ashworth, Postage		34.09
Oct. 11, by Check Eagle Printing Co.		5.50
Dec. 10, by Check Lohmeyer, Goldsmith, Patterson Co.		10.00
1922		
Jan. 27, by Check Jas. R. Bloss, Salary		500.00
Feb. 7, by Check Moundsville Echo		29.50
Feb. 14, by Check W. Va. State Medical Journal		500.00
April 19, by Check R. A. Ashworth, Salary		500.00
April 19, by Check H. G. Nicholson, Treasurer		100.00
May 10, by Check J. N. Simpson Special Fund		300.00
May 13, by Amt. to Indigent Fund		926.00
May 13, by Amt. to Medical Defense		866.00
May 13, Balance in		

General Fund		3,844.45
	$8,140.39	$8,140.39

Medical Defense Fund

1921		
May 28, by Check H. P. Linsz, Expense....$	37.50	
Aug. 12, by Check F. L. Maury, Suit Myers	50.00	
Nov. 18, by Check A. A. Shawkey, Suit Tabit	152.20	
1922		
May 13, By Balance in Fund	6,638.09	
1921		
May 28, To Balance in Fund		6,011.79
May 13, '22, To Amt. from General Fund, 1921-22		866.00
	$6,877.79	$6,877.79

Indigent Fund

1922		
May 13, By balance in Fund .....$	3,324.00	
1921		
May 18, To Balance in Fund		2,398.00
1922		
May 13, To Amt. from Genl. Fund 1921-22		926.00
	$3,324.00	$3.324.00

Dr. Anderson moved that the report of the Treasurer be received and filed with the Council for an audit. This motion was amended to include a vote of thanks to the Treasurer. Motion carried.

Report of Scientific Committee

Your Scientific Committee begs leave to report by conference and letters that they unanimously agreed that thirty-three papers including the President's Address and the orations on medicine and surgery would be enough mental feast for the members of the Association, as the Cabell County Society, our host, was anxious to give us some clinics. We agreed that we would have clinics from 8:00 to 10:00 the first two mornings. We farther agreed that we would have a General Session the first day, the Medical and Surgical Sessions the second day, and then a General Session the last day. We thought the proper division of the subjects would be to have ten surgical papers, ten medical papers, and the other thirteen of general intellect. We asked half of the active Societies in the State to elect some one to appear upon the Medical Session or the General Session. We were disappointed in the few responses we received. It seems that most men who give papers prefer some surgical subject.

Very respectfully submitted,

GEORGE A. MacQUEEN,
President.

JNO. E. CANNADAY,
Secy. Surgical Section.

ROBT. A. ASHWORTH,
Secretary.

Dr. H. P. Linsz, Chairman of the Council, presented the following amendment to Chapter XI, Section 8, of the By-Laws, stating that the Council recommended its adoption:

"Sec. 8. The Executive Committee shall furnish all necessary legal advice, all medical expert services, and pay all the necessary expenses connected with the case, (provided that the attorney fee shall not exceed $300.00), and provided that nothing in this understanding between the State Association and its members shall conflict with united action in the defense by officials of any corporation organized for this specific purpose with which the member may be connected, and provided that when such connection exists (the State Association shall

not be liable for any attorneys' fees.") (Amendments in parenthesis.)

A motion was made and adopted that it lie upon the table for one day. The next day this amendment was unanimously adopted by the House of Delegates.

The Committee to Audit the Report of the Editor of the Journal reported as follows:

We, the Committee appointed by the President of the Council to Audit the Report of the Editor of the Journal, find it correct as submitted, having gone over the cancelled checks, the stubs and receipts, and we approve the report.

C. H. MAXWELL, Chairman.
R. H. DUNN,
L. H. FORMAN.

The report of the Auditing Committee of the Journal was adopted.

The Secretary read a letter from Dr. Henshaw, State Health Commissioner, asking that the House of Delegates name three physicians, one of whom might be appointed as Director of the Bureau of Venereal Diseases. The matter was discussed by Doctors MacQueen, Anderson, Godbey, Farley, Rader, and Churchman. Dr. Anderson moved that the President appoint a committee of two to nominate to the House of Delegates, at its next meeting, five men, from whom the House of Delegates should select three to be recommended to the State Health Commissioner. The motion was duly seconded, and was discussed by Doctors Godbey, McMillan, Walker, Black, Vest, and L. S. Henley. Dr. Schultz amended the motion to provide that the matter be postponed until the next meeting of the House of Delegates, and the motion to table was adopted. This was never taken up again though the Secretary thanked Dr. Henshaw for his recognition of the Association in this way.

Dr. R. H. Dunn moved that Mr. Ivan Davis and Dr. Guthrie be extended a vote of thanks for their entertainment, which motion was carried.

The report of the Committee on Public Policy and Legislation was presented by Dr. John N. Simpson in the following resolutions:

"Resolved, that the registration law be so amended that the attending physicians be paid not less than twenty-five cents for reporting each birth or death."

The West Virginia Medical Association commends the action of the American Medical Association in fighting fakes of all kinds against the public welfare, and especially so in exposing the hum-buggery of the chiropractors, and respectively suggests that this fight be pushed with great vigor.

The West Virginia Medical Association stands solidly behind the county officials of the state in the prosecution of the violators of the health regulations, especially the chiropractors.

Resolution in Regard to Defrauding Hospitals

"Every person who shall, at any general hospital, receive or cause to be furnished board or surgical or medical care with intent to defraud such hospital of the amount due for such board or surgical or medical care and who shall obtain credit at such hospital by the use of false or fraudulent means, shall be fined not

more than fifty dollars, or imprisoned not more than thirty days or both. The departure without intent to return of any patient from any general hospital, without payment of the amount due such institution, and without actual notice to the officials of the institution of the intent to depart, shall be prima facie evidence of the intent to defraud. A general hospital within the meaning of this act, is any public hospital not conducted for profit, by which all patients applying are received to the extent of its capacity and facilities."

Adopted.

Whereas, the question of medical education in West Virginia has been widely discussed recently; and

Whereas, there is apparently a scarcity of physicians in our State, especially in the rural districts; therefore

Be it resolved, that this meeting ask our next legislature to authorize the appointment of a Commission on Medical Education in West Virginia, the members of which shall be appointed upon the recommendation of the West Virginia State Medical Association, the function of which body shall be to consider the question of medical education in our State in all its phases, to report its work and conclusions, and to make recommendations as to the proper solution of this pressing problem.

ELECTION OF OFFICERS

President, Dr. John N. Simpson, Morgantown.

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Sixth District, Dr. B. B. Wheeler, Beckley.

Delegate to A. M. A., Dr. J. R. Bloss, Huntington.

Alternate, Dr. M. V. Godbey.

Place of meeting, 1923, Beckley.

Date of meeting to be set by the President, Secretary, and local committee of arrangements.

The President appointed, as additional members of the Committee on Public Policy and Legislation, Dr. Samuel R. Holroyd, of Athens, and Dr. M. V. Godbey, of Charleston.

Dr. Frank LeMoyne Hupp read the report of the Memorial Committee, which was adopted by a rising vote.

The Committee on the President's Address respectfully submits the following:

That they heartily endorse the high ideals which the President places before the individual physicians of the state with reference to his relations to his patients and to the profound obligations imposed upon each member of the profession when he is called to relieve suffering and to prolong the life of his

fellowman.

We are especially impressed with the suggestion that the physicians of the state should encourage thorough preparation and helpful consultation and discourage lack of training and incompetency in their ranks.

We are further impressed with the suggestion that the profession should lend every assistance possible collectively and as individuals to our Public Health Organizations and use our every effort to eliminate politics from the conduct of these bodies that their efficiency may not be impaired. We heartily approve of economy in our State Health affairs, but do recommend that the suggestions with reference to the amending of our present compenation law be endorsed. Your Committee furthermore endorses the President's appeal that we formulate at this meeting a definite legislative policy with reference to the establihment of a Four Years' Medical Course at our State University and other important matters.

Finally, we wish to congratulate our President on his excellent and masterly address and for the many helpful suggestions he has offered for the welfare of the profession in West Virginia and that we commend it to the thoughtful consideration of every member of the Association.

Respectfully submitted,
J. HOWARD ANDERSON,
HARRY HALL,
C. R. OGDEN.

The Committee to Audit the Treasurer's Accounts reported that they had been found correct. The report of the Committee was accepted.

A HISTORY OF THE WEST VIRGINIA STATE TUBERCULOSIS SANATORIUM AND A REVIEW OF ITS PATIENTS*

By E. E. CLOVIS, M. D., and G. E. MILLS, M. D.

Read Before the Little Kanawha and Ohio Valley Medical Society

*In a succeeding article factors necessary for better results will be discussed.

A brief history of the institution is related for it is frequently discovered that some of the physicians of the state have become only slightly apprised of its existence, and perhaps a few not at all. As its future life and accomplishments are dependent upon them, and as we desire a manifestation of greater interest and co-operation, the pertinent facts relative to its foundation and growth are related.

The Legislature of 1911 established the Sanatorium and appropriated money for its commencement. After due consideration by the State Board of Health and the State Board of Control a site was chosen near Terra Alata. The natural advantages accruing from the location were instrumental in its selection viz: the altitude nearly 2600 feet provided an invigorating climate; and a trunk line railroad secured accessibility for the patients and close contact with the markets for supplies.

The first buildings were constructed in the fall of 1912, and consisted of two cottages for ambulant cases and an infirmary, each of which had accommodations for twenty patients. By 1915 the demand for more admissions became so emphatic that three buildings of

similar design were erected. The next problem confronted was the imperative need of a hospital, and an excellent structure for this purpose with private rooms and open wards for forty patients was opened during the summer of 1919. Two buildings of twenty beds each were finished in 1920, which were built at the instigation of the State Council of Defense for the treatment of tuberculous soldiers. A Central Dining Hall was completed in the spring of 1921 having a seating capacity of four hundred. This building is well equipped and will be adequate for many years. A Hospital Addition is now planned which will increase the hospital beds to 106. This is our most pressing need and will be under construction this year. One of the old infirmaries has been converted into a cottage for children which is ideal for this purpose, providing a school room and rooms with sleeping porches for two attendants and eighteen children. Since this building was opened in July 1921 it has been practically filled to capacity.

The institution was formally opened for the reception of patients on Jan. 15, 1913, and despite the skepticism which was and is—to a lesser extent—prevalent in the state, the applicants have far exceeded the number possible to admit. The present number of beds is two hundred and the addition planned for this year will bring the total to 266.

From it beginning we have endeavored to utilize any new method that would be of benefit to our patients. Artificial pneumothorax and tuberculin have been employed for several years, and in selected cases undoubtedly prove of great value. The administration of the former occasionally produces results which are almost dramatic. It is evident in the case of some of our patients that the use of tuberculin is being abused by their physicians. This therapeutic agent should not be used indiscriminately as in unsuitable caes it will produce much harm. We are equipped with an X-ray, which was installed two years ago, and has proven of invaluable aid in diagnosis and in pneumothorax treatment.

Review of Patients

This review covers the period of nine years from Jan. 15, 1913, to Jan. 15, 1922. During this time there have been 1944 admissions, and the following table summarizes them according to the bi-ennial reports made by the superintendent, and classifies the stage of the disease on admission.

Table No. 1

Period	Admis.	Stage 1	Stage 2	Stage 3	Non-T. B.
Jan. 15, '13, to July 1, '14	200	28	65	96	11
July 1, '14, to July 1, '16	324	37	147	125	5
July 1, '16, to July 1, '18	442	58	175	200	9
July 1, '18, to July 1, '20	501	51	184	253	13
July 1, '20, to Jan. 15, '22	477	58	139	274	6
Totals	1944	232	720	948	44

The total admissions are seen to increase in every report, the last (from July 1, 1920, to Jan. 15, 1922) covering a period of eighteen and one half months, almost equalling the admissions in the two previous years. The admissions have constantly kept pace with the additional beds provided by new buildings.

The number of incipient cases constitutes a very small per cent of the general total, 232, or 11.9%; the moderately advanced were 720, or 37%; and 948, or 48.8% were classed as far advanced. There were 44, or 2.3% admitted as non-tuberculous for observation. Of the 948 far advanced it is no exaggeration to say that more than two thirds arrived at the institution in a hopeless condition, and since they constitute almost fifty per cent of the total admissions it is readily seen that almost one patient out of three was admitted when improvement was beyond aid of sanatorium treatment, and unless these conditions are to a great extent eliminated we can never hope to attain many permanent results as the handicap is entirely too severe to overcome. This should emphatically and forcibly impress the urgent need of earlier diagnosis, as well as the necessity of persuading patients to enter the sanatorium as soon as possible after diagnosis has been established.

Table No. 2 gives the total number of patients discharged and their condition on discharge.

Of the 1774 discharges, 251, or 14.1% were classed as apparently arrested, 695, or 39.2% as improved, 629, or 35.5% as unimproved and 31, or 1.7% were found non-tuberculous. The latter discharges were usually found to have bronchitis, empyema or asthma. The total number of deaths was 168, or a mortality of 9.5%.

In reviewing the family history of the patients we found that 48% gave evidence of tuberculosis, and in the married, a consort history was present in 7.2%. As it has been well proven that heredity plays very little part in transmission of the disease, the significant fact of contact infection is demonstrated. A contact history outside of the family is often very impossible to obtain, as one may be working or living with a tuberculous individual who is not aware that he has the disease, or knowing, conceals it, but when such a history is elicited it has an important bearing relative to the patient's infection.

The history of the pulmonary tuberculosis elicited that 30% had pulmonary hemorrhage before admission, and this was occasionally given as the onset of the disease. The reason assigned for the high per cent of hemoptysis is the large number of far advanced cases ad-

Table No. 2

Period	Dis.	App. Arrest	Imp.	Unimp.	Died	Non-T. B.
Jan. 15, '13, to July 1, '14	150	29	42	71	8	....
July 1, '14, to July 1, '16	278	53	82	105	30	8
July 1, '16, to July 1, '18	538	33	184	157	50	14
July 1, '18, to July 1, '20	456	58	201	150	41	6
Totals	1774	251	695	629	168	31

mitted, in which one finds a greater prevalence to the symptom.

It was surprising to find after reviewing the histories that pleurisy was found as the initial symptom of the disease in only 1% of cases. This perhaps is merely a co-incidence, and as a rule should be somewhat higher. After other symptoms are manifested pleurisy becomes quite a common symptom. The onset in the majority began with an acute cold, followed by persistent cough. There may have been other slight symptoms and perhaps very frequently were, before the so-called cold and cough, but were often impossible to elicit and then only when a great amount of patience was exercised.

The sputum was positive in 62% before and upon admission. It was not possible to tell the per cent becoming positive during their stay, as the earlier records of laboratory reports were in many cases incomplete. Only 40, or 20% of those discharged have been re-admitted as patients.

There were 756 patients admitted from Jan. 1, 1919, to Jan. 15, 1922, of whom 326 or 43% gave a history of having influenza. We have no authentic figures relative to the per cent of the population who had influenza during this period, but we feel that it was much higher than the per cent among those just mentioned. One might suspect that in a group which developed pulmonary tuberculosis that there would have been a higher incident of influenza, but such was not borne out in these patients. Only fifteen of the patients in the institution contracted the disease, all of whom with one exception, made a good recovery.

It is interesting to note that 21% or practically one half of those giving a history of having had influenza attributed the onset of tuberculosis to this disease, and its frequent complication, pneumonia. There were many specialists of tuberculosis who believed at the beginning of the epidemic, that this respiratory disease would greatly enhance the incident of pulmonary tuberculosis. This has not been the result, for it could not have caused a very high morbidity without appreciably increasing the death rate, and the 1920 death rate was the lowest in the history of statistics. However, it is only fair to assume that it did in a few cases, cause an outburst of frank tuberculosis and in a larger number of reactivation of an old foci.

Follow-Up Report

Questionnaire blanks were sent to the patients for answers and are the basis on which this report is made. We were disappointed that more of the blanks were not returned, and indifference on the part of some, and many changes of address are assigned as the reaon. However since 336 of these have complied with our request, we deem the number sufficient to derive conclusions. There were 263 patients discharged during the past year to April 1, 1921 and are not included in the report, as the time since their return to their homes and work has not been of sufficient duration to be of any significance. The deaths which occured in the institution, the non-tuberculous discharges and the re-admissions who are at present receiving treatment are deducted

from the total discharges, leaving 1297 as the basis for this report.

Year	Well	Imp.	Stat'y	Worse	Work Full Time	Work Part Time	Not Working	Known	Dead
1913-1914	24	3	6	3	31	3	2	84	126
1915-1916	48	4	15	5	57	5	9	96	170
1917-1918	33	17	19	13	61	6	15	136	92
1919-1920	41	36	44	15	65	31	40	128	86
To Apr. 1921..	6	2	6	2	6	3	2	39	4
Total	152	62	84	38	220	48	68	483	478

The 363 replies consisted of 181 women and 155 men, of whom 152, or 45.2% reported that they were well, that is, free from symptoms and working full time; 62, or 18.5% as having improved; 84, or 25% whose symptoms had remained stationary; 38, or 11.3% stated that they were worse. We realize the report would have had more significance if each patient had had a physical examination, but since this was impossible for obvious reasons, we were compelled to accept the patients' statements relative to their condition. There were 220, or 65.4% who reported as working full time; 48, or 14.2% as working part time, and 68, or 20.2% not working. We were unable to locate 483, or 37.2% and found that 478, or 36.9% had died since leaving the institution.

Conclusions

The real incentive of this review has been to present the results of the sanatorium during its existence with the hope that it may be the means of combatting some of the prevalent skepticism. A large percentage of those who were sent us as incipients, some of the moderately advanced, and even a few far advanced were discharged apparently arrested and have remained well and free from symptoms after returning to their former occupations, while others have had the disease checked to such an extent as to permit them to live useful lives for many years. The great number of hopeless cases admitted have been made more comfortable, and finally what is of great importance, it has taught the patients how to care for themselves as well as to protect others.

It has also brought to light many problems which, in the main, will have to be eliminated before we can accomplish the results which are possible for us to attain. Many of these questions will be solved, and the way will be paved for solving others, if the physicians of West Virginia will manifest a greater interest in this field of medicine. The work of the past has barely scratched the surface, and from a medicinal and economical standpoint, there is no problem more vital than this. It is conservative to assume, basing our assumption on cities and localities where a strict survey of tuberculosis has been made, that there are 30,000 people with pulmonary tuberculosis in this state, and of whom fully one half have the disease in active form. Thus it is readily seen that the disease concerns every community and its people. The bulwark of the defense rests in the physicians, and

on them, therefore, falls the greater part of the responsibility for what is to be accomplished in the future.

In conclusion the future growth of the institution will depend upon the demands made by those desiring treatment. We believe that the location affords a climate far above the average in the East, and that the patients are being given all they can get in any sanatorium, either private or public, and a long journey to other climates and sanatoria is certainly unjustified until our own institution is given a trial by the physicians for their patients.

June 17, 1922.

DR. JAS. R. BLOSS, Editor
The West Va. Med. Assoc.,
Huntington, W. Va.

Dear Doctor:

Enclosed please find a report on a case of mine. Will you kindly tell me what you think of this case?

Yours very truly,
H. H. FARLEY, M. D.

Members are asked to make comments on the case.—J. R. B.

REPORT OF CASE

H. H. FARLEY, M. D., Logan, West Va.

Several days ago I was called in to see a male child, age 14 months. The mother informed me that she had previously called in three other physicians to attend the child and that she had been much dissatisfied with the progress of the disease. One of these physicians had diagnosed the disease as typhoid and another influenza, another one gastrointestinal trouble.

The baby gave a history of having been sick for 17 days previous to my seeing it. I made full physical examination and my attention was at once directed to its respiratory tract on account of the very rapid respiration and the diminished expansion on the right side of thorax. Percussion showed considerable dullness. Auscultation gave various musical rales with very distant breathing. There seemed considerable compensatory breathing on the left side of chest. Pulse 130; temperature 102; respiration 60.

The next day on going back to see my patient, its general condition had changed but very little, the mother told me that its "navle" had broke during the night and was "running" a great deal. Upon examination I found a discharging sinus at the upper part of the umbilicus emitting considerable amounts of sero-fibrinous pus.

I told the Mother that I would aspirate the child's chest on my next visit to see whether the child's chest contained empyemia, thinking that possibly an empyemia existed in the child's thorax and had dissected down through the diaphragm and between the diaphragmatic and parietal plurae and the abdominal wall and discharged at the upper side of the umblicus.

During the night I got a message that the child had died. I did not have an opportunity to make my exploratory puncture into the plural cavity. The parents would not give consent to autopsy.

Could this have been an empyemia with a fistula at the umblicus?

THE WEST VIRGINIA MEDICAL JOURNAL

JAS. R. BLOSS, M.D., Editor.
C. R. ENSLOW, M.D.
J. E. RADER, M.D. Assistant Editors.

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All original articles for this Journal must be made to it exclusively. Communications and items of general interest to the profession are invited from all over the state. Notices of deaths, removals from the state, changes of location, etc., are requested.

Our readers are requested to send us marked copies of local newspapers containing matters of interest to members of the medical profession. Name of sender should be given.

CONTRIBUTIONS TYPEWRITTEN

It is much more satisfactory to all concerned if authors will have their contributions typewritten before submitting them for publication. The expense is small to the author—the satisfaction is great for the editor and printer.

Contract with present printer specifies all articles, communications, etc., MUST BE TYPED.

ADVERTISEMENTS

Advertising forms will go to press not later than the tenth of each month.

All advertisement must conform to the standard established by the Council of Pharmacy and Chemistry of the A. M. A.

REMITTANCES

Should be made by check, draft, money order, express order or registered letter to Dr. Jas. R. Bloss, Chairman of Publication Committee, Huntington, W. Va.

Editorial Office: 804 Lincoln Place, Huntington, W. Va.

The Committee on Publication is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

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SIXTH DISTRICT: J. W. Moore, Charleston, one-year term: R. H. Dunn, Charleston, two-year term.

THE MATERNITY LAW

We note that steps are already being taken in our State to qualify with the requirements of the Children's Bureau of the Federal Government, along the lines of the Shepherd-Towner Act, the so-called Maternity Welfare Law.

To us it appears that in the passage of this Act another step has been made toward "State Medicine." If one will calmly take an inventory of the agencies at work, and of how these agencies are infringing so repeatedly and consistently upon our professional rights, the feeling must come that our profession is shortly to be shorn of that individualism which has made it the greatest of all professions.

One has but to view the condition of the profession in foreign lands to feel the danger threatening the American ideals which have produced such giants in medicine and surgery as we have to be proud of.

There is no question but that the attention given to obstetrics,—covering pregnancy, delivery and convalescence,—has been but meager

as compared to other branches of our work. There have been teachers striving to inculcate the great importance of this branch of our practice,—in our opinion the most important specialty there is in the field of our work, and at the same time the most neglected one.

That improvement in the method of teaching the laity the importance of pre-natal, natal and post-natal care of both mother and child is needed is readily admitted. Still we cannot but feel that this should come through the State Boards of Health, and the U. S. P. H. S., and not through such channels as are provided by the Act.

In this connection it might be added that one of the greatest obstables to be met by the State Board of Health of this or any other State, is the niggardliness with which appropriations for carrying on their work are made. The health of our citizens has been, seemingly, a matter of small consideration. An equal sum appropriated to be expended under the administration of a capable State Health organization would provide for more wide-reaching results.

If these conditions continue one may foresee a time when one applies to some spinsteristic reformer (of either the male or female sex), for a license to have a baby and then "try" to raise it in the good-old-fashioned-way, somewhat after the manner of annual dog or hunting or fishing permits or licenses. Even then it shall only be permitted under certain rulings from the Secretary of Labor through the Children's Bureau as to time of day, phase of the moon, bearing in mind the season of the year, temperature at sea-level with altitudinal variations correctly estimated, and diet lists carefully prepared and explained by the visiting investigators, upon whose final report depends the possibility of our being able to, at some future date, secure another license.

SELAH!

ANTIVIVISECTION AGAIN

It seems that there will never be a rest for those of our fraternity engaged in research work. Now we find that the profession of Colorado will have to stem an attack from the anti-vivisectionists at the election to be held in November.

Some years ago in argument with an antivivisectionist friend the discussion became somewhat heated, in fact personal comments upon the mental equipment of the debators, more or less embellished with lurid adjectives as to the varieties of fools some people could be, wound up the discussion. It was remarked that at some future time it was to be hoped that a dear one of his might prove the old adage as to "the difference it made whose ox was gored." Two or three years later his wife developed Diphtheria when their baby was about six months old. Twenty thousand units of antitoxine very promptly cured the mother; five hundred units to the baby and a thousand to the nurse prevented either of them developing it, and the baby nursed straight ahead in the face of opposition, to prove the absolute protection offered by this God-given member of a physician's armamentarium. It was gently (?) suggested that the horse providing the antitoxine had at least in one instance been of

slight assistance at that time, and as much as we love horses it appeared that his wife and baby might have seemed more valuable than the horse, even if it had died to save them, intead of being alive, well and unhurt. There has been no further argument.

One feels at times that it would be a very great blessing could all of this ilk get a strong dose of personal contact with realities. It would cure quite a number of folks of their misguided enthusiasm.

We hope that our brethren in Colorado will as successfully wield the "fool-killer club" in November as did those in California in 1920.

THE BEST POLICY

To tell the "truth, the whole truth, and nothing but the truth" when off the witness stand is not a policy that can invariably be followed by the practitioner of medicine, an eminent colleague in a neighboring city to the contrary notwithstanding. Absolute truth telling is, however, the ideal at which the practitioner should aim. If human nature were without frailties and human courage were perfect, plain truth would be the golden rule. But when courage is lacking and fear, the bete noir of the Eddyrite, lurks in the wing, awaiting only as the cue the word of unvarnished truth ere it takes the very center of the stage—when, in other words, only ignorance of the truth prevents panic, let the doctor beware. Under such circumstances to blurt out the cruel facts is to commit crime. It is atropine in glaucoma.

If, however, knowledge of the truth will not positively harm the patient, it is the duty of the doctor to the best of his ability to impart it. The day of mystery in medicine is over. We no longer look wise, prepare peculiar pills and potions, write mysterious, supposedly Latin words and queer symbols on prescription blanks, and satisfy the patient with long and quite unintelligible names when he asks us what his trouble really is, but we put the truth as we see it into simple language, not trying to conceal those aspects of the case which may be puzzling to us. Thus we gain his confidence and co-operation based on a reasonable conception of what we are about. It is by such straightforward dealing that public trust in the medical profession is fostered. It is true that very often the optimistic side of the truth must be stressed to bolster up courage that is wavering; also at times the warning note must be sharply sounded to curb the enthusiasm of him who would too freely risk his welfare. Nevertheless we deal strictly with demonstrable facts. Thus, gradually the public is learning the basis, the extent and the limitations of the science and art of medicine. A general knowledge of these things will mark the end of charlatanism inside as well as outside the profession.—Editorial Rhode Island Medical Journal.

COUNTY SOCIETY REPORTS

May 11, 1922.

The regular meeting of the Cabell County Medical society met in the assembly hall of the Frederick Hotel at 8:30 p. m. There were no reports of committees and election of delegates to the state meeting was held.

Dr. Vest and Dr. J. A. Guthrie were elected to represent the society at the state meeting. Both were elected by unanimous ballot.

A bill presented was ordered paid. Six dollars for Dr. Jenkins.

Miss Leggett, visiting nurse of the West Virginia anti-tuberculosis society, then addressed the society on her work. Asking for co-operation of the doctors.

Dr. Guthrie brings up the subject of the election of president for the state society and the 4-year medical school, asking what the desires of the local society are in these matters. Dr. Bloss, Dr. Vest, Dr. C. T. Taylor and Dr. A. K. Kessler all spoke on the subject and it was found to be the will of the society to instruct our delegates to vote for the four-year school and for Dr. Simpson as president of the state society.

The subject of chiropractors was then brought up and discussed by several members, a motion finally being made by Dr. Hubbard and seconded by Dr. Kessler to appoint a committee to see how many illegal practitioners we have in Huntington. Then to put the matter before Mayor Campbell for enforcement. This motion carried and the committee appointed was Dr. A. K. Kessler, Dr. Biern and Dr. Beckner.

Dr. Fitch and Dr. Kessler think we should have a change in the officers of the A. M. A.

The secretary then put a motion to have the Letter Shop print and send out cards announcing the regular meetings of the society. Dr. Swezey seconded this motion and the society passed it as made.

Dr. Biern moved that a letter of invitation be sent to the dental society to come to any or all of the state meetings. Seconded by Dr. Marple, motion passed. Dr. Pepper asked that the Boyd County Society of Ashland, Ky., be added to this motion. Accepted.

Dr. Bobbitt reports that the visiting ladies at the state society will be entertained at the country club and the theatre on Thursday afternoon and night respectively. He asks that the men present insist on their wives attending the tea at the country club.

There being no further business, adjourned.

Members present, Drs. C. Tt. Taylor, I. W. Taylor, Vest, Biern, Hereford, Pepper, Swezey, Hunter, Marple, Guthrie, Hines, A. K. Kessler, Yost, Hubbard, Watts, Hatfield, Fitch, Hodges, Howard, Willis, Adkins, and Bobbitt, W. C. Swann, and Bloss.

May 25, 1922.

The meeting was called to order by the president, at 8:30 p. m. The minutes of last meeting were read and approved.

The following bills were presented and ordered paid by a vote of the society, $12.50 to Mrs. Gieskie for cakes. Mrs. Hawes for ladies entertainment. Mrs. Hatfield. White Oaks trio, entertainers. $6.00 Mrs. E. H. McCrea, registration. $1.60 F. C. Hodges, stamps bought last year. $5.50 W. C. Swann, stamps.

Dr. Bloss brings the matter of men attending the state meetings and banquet, who had not paid in dues or assessment. It was decided to send bills to these men for the back dues etc.

Dr. Biern reports for the committee on illegal practitioners, 21 illegal

practitioners in Huntington. This was followed by considerable discussion by the following men. Drs. Guthrie, Biern, Fitch, Hubbard, Vest, Hodges and Bloss. It was then moved by Dr. Hubbard that the subject be dropped for this meeting, seconded by Dr. Vest, motion passed.

Dr. Biern suggests that to get better acquainted we have a committee appointed to see about having a weekly luncheon for the members of the society. A motion made by Dr. Biern was seconded by Dr. Vest and was passed. Dr. Biern was appointed as a committee of one to report on this matter at the next meeting.

Dr. Vest reported a very interesting case of systemic yeast infection, now under his care at the C. & O. hospital. The subject was discussed by Drs. Belcher and Swann. Dr. Vest then closed the discussion and invited anyone interested to come to the hospital and see the case. Adjourned.

Members present: Drs. Fitch, Biern, Hodges, Willis, Watts, Vest, Bloss, Swann, Hereford, Pickering, Beckner, Guthrie, J. A., Hubbard and Belcher.

STATE AND GENERAL NEWS

June, 1922.

Dr. J. H. Rowsey of Huntington, who has been in ill health for some time, is gradually improving and is able to be on the street again. Dr. Rowsey recently spent some weeks under treatment at the Mayo Clinic.

Dr. Aaron Arkin of Morgantown, West Va., sails about August 8th for a year abroad, to de research and clinical work in Pathology and medicine at Vienna, Berlin, Paris and London.

There will be a joint meeting between the Raleigh and Fayette County Societies in Beckley, W. Va., on July 20th, and there will be clinics on Surgery, Internal Medicine, Ear, Eye, Nose and Throat, and Genito-Urinary. Men of national reputation will hold these clinics, and later in the evening will present papers. All clinics, as well as the dinner will be held at the Beckley Hospital. The clinics will commence at 1 P. M., and the meeting will adjourn about 11 P. M. A cordial invitation is extended to any doctor who wishes to be present, and all are promised a good time. We anticipate a big meeting.

Dr. S. D. Hatfield, cousin to Dr. H. D. Hatfield of Huntington, died recently following an accident at his home in Kokomo, Ind. Dr. S. D. Hatfield is the son of Ephriam Hatfield of West Virginia, and formerly lived at Iager, W. Va.

MEDICINE AND SURGERY

DOMESTIC QUARANTINE AND VENERAL DISEASE

"The migration of persons suffering with veneral disease from their home state to another state without first procuring from their local health officer a permit stating that their travel is not dangerous to public health violates the Federal law, forbidding the spreading of contagious diseases and will be rigidly suppressed," says the U. S. Public Health Service.

"Last spring the Attorney General at the request of the service, instructed all United States attorneys to co-operate fully with it and to

prosecute offenders vigorously. Since then several violators have been sentenced to reformatories, where their disease—spreading activities have been stopped and they themselves are receiving proper medical treatment.

"The law and the regulations based on it are not so widely known as they should be; and the objects sought in their enforcement are not everywhere clearly understood. The law seeks to control the spread of disease but not necessarily to prevent the travel of venereally diseased persons. Such travel, if undertaken under proper precautions in search of medical help will be encouraged by the service. The law, however, seeks to close every channel through which venereal disease may be spread; and to do this it has been found necessary to put a stop to the movements of those who seek to migrate from one state to another in order more safely to carry on the business of spreading disease.

"When such persons and their associates learn that travel from one state to another while venereally diseased leads to arrest and severe punishment they will have an added incentive for submitting to voluntary treatment; and the day will be hastened when every infected person will at once place himself or herself under the care of a skilled physician of his or her own selection.

"At present it is probable that many persons either never receive proper treatment or that they cease treatment too early in the belief that they are cured and thus become dangerous. Laws on this subject differ in the different states; and this fact leads to migration from those whose laws are rigid to those whose laws are less so.

"No attempt either by the U. S. Government or by state governments to police the state borders seems practicable. The laws of practically all states, however, require physicians to report all venereal cases that come to their attention; and a judicial or police investigation of the history of any apparent new-comer who chances to be arrested will early disclose most of the new arrivals in the state. These may then be proceeded against under United States law.

"Proceedings," adds the U. S. Public Health Service" are based on the Interstate Quarantine Regulations, whose making by the Secretary of the Treasury was authorized by Congress February 15, 1893 (27 Stat. ch. 114, p. 449) amended March 3, 1901 (31 Stat., ch. 836, p. 1086). Objections on the ground that the regulations are insufficient or defective or that Congress may not delegate its legislative authority are without merit. The secretary's act in making the regulations is administrative and is authorized by the act of February 15, 1893. The penalty for violation is fixed by Congress, is legal, and has been sustained in United States courts. Details of the above are given in reprint 693 of the U. S. Public Health Service, just issued.

Permits for travel obtained from the local health officer must state that the travel in the opinion of the officer is not dangerous to the public health. The traveller must state where he intends to reside; and he must agree in writing to report to the proper health officer there within one week after arrival and to continue treatment under a reputable physician until the health offi-

cer certifies that he is no longer infectious. The health officer who issues the permit must promptly notify the new health officer, who must take appropriate action.

THE INFLUENCE OF FAMINE ON DISEASE

The vast experiment on undernutrition furnished by the war taught much concerning other things than nutrition itself, especially the relation of nutrition to the incidence or manifestations of all and sundry disease processes. Much has been written concerning the decrease in obesity and diabetes among the population of the central powers as a result of enforced temperance as to food, while the tuberculosis curve during the famine years has been extensively discussed. During the period of short rations the alimentary canal also had new experiences, both as to quantity and character of food, the potato and turnip assuming a more conspicuous place in the day's work of digestion than had previously been the case. Apparently, on the whole the digestive tract met the new demands with success, for there seems to be no agreement in the German literature that there was any general increase in diseases of this part of the anatomy during the war. Some authors as Boas and Albu, state specifically that there was no such increase; but many others report an increase in chronic dysentery, gallbladder disease and gastric ulcer. In view of the reputed relation of cancer of the stomach to the character of the diet, and especially the vegetarian's belief that this disease is the result of meat eating, it is interesting to report that a careful study of Janowitz* shows no evident alteration in either the number or the location of cancers of the digestive tract as observed in Berlin during the war, when compared with a similar group of population before the war. —Jour. A. M. A.

*Janowitz, Frieda: Ueber das Verhalten der malignen Tumoren des Verdauungstraktus wahrend des Krieges, Ztschr. f. Krebsforsch. 18:34, 1921.

METHOD OF DEALING WITH INTESTINAL LOOPS DENSELY ADHERENT TO UMBILICAL HERNIA.

Thomas S. Cullen, Baltimore (J. A. M. A., Feb. 25, 1922), reports a case of recurrent umbilical hernia in a man, aged 78, in which he found extensive adhesions of the small bowel. He cut the ring loose from the abdominal wall all the way around. The sac contained many loops of bowel which were densely adherent to the sac—so adherent that liberation was out of the question. Cullen dissected the skin away from the hernial sac, after which there was left a hernial covering consisting of peritoneum firmly fixed to a greatly attenuated layer of fascia. No further attention was paid to the sac as such. Loop after loop was separated from the adjoining one until the small bowel was completely unraveled. There were from thirty to forty patches of sac adherent to intestinal loops. The loose edges of these patches were trimmed off with scissors. The outer surfaces of the patches were smooth and whitish, and did not bleed at all. The bowel was pushed back into the abdomen, the omentum drawn over it, and the patient given gas for a few moments, until

the ring, which measured 4 cm. in diameter, was closed by the usual overlapping method. Recovery took place without incident.

BOOK REVIEWS

Submucous Resection of the Nasal Septum, by W. Meddaugh Dunning, M. D. Consulting Otologist, Fordham Hospital, N.Y.C.; Consulting Otologist Manhattan State Hospital, N.Y.; Consulting Laryngolist Ossing City Hospital, Ossing, N.Y.; Consulting Laryngolist, The Alexander Linn Hospital, Sussex, N.J.; Assistant Surgeon Manhattan Eye and Ear Hospital, N.Y.; Surgeon, Bronx Eye and Ear Infirmary, N.Y.

Its contents thoroughly cover the Nose-Breathing and Smelling; Common Septal Deviations; Surgical Procedure; Typical Case Histories and their Significance; the Saddle-Back Nose, etc.

A painstaking effort on the part of the author to describe in minute detail a very complicated operation making it reasonably simple for a beginner.

Any expert nasal surgeon will read the book with pleasure because troublesome complications familiar to experienced men are dealt with in a most interesting and practical manner.

If written fifteen years ago, it would have revolutionized nasal surgery.

A most practical and comprehensive treatise.—C. M. H.

Practical Medicine, Series, 1921, comprises 8 volumes on the year's progress in medicine and surgery. Under the general editorial charge of Chas. A. L. Mix, A.M.M.D., Professor of Physical Diagnosis in the Northwestern University Medical School.

The eight volumes are issued at about monthly intervals, each volume being complete, on the subject which it treats, for the year prior to its publication. While the series is published primarily for the general practitioner, the arrangement is such that those interested in special subjects may purchase such parts as they desire. Prices from $1.75 to $2.50 per volume. The whole series for $12.00. The Year Book Publishers, 304 S. Dearborn St., Chicago, Ill.

Practical Chemical Analysis of Blood, by Victor C. Myers, M. A., Ph.D. Cloth, price $3.00. C. V. Mosby Co., St. Louis.

During the past year there appears a series of excellent articles by the author, in The Journal of Laboratory and Clinical Medicine. The little book of 121 pages is composed essentially for the article giving one a very convenient and ready guide to chemical blood analysis, to which every internist and surgeon often must look to throw light on some obscure disease, or to aid in determining an operative risk or a prognosis.

A very pleasing feature of the work is tendency toward simplicity, only the methods involving the least amount of work consistent with accuracy are given. The color meters described are simple and inexpensive. But the actual technique of determining the various chemical blood constituents is not the only information contained for with each constituent there is a concise statement of the part played in metabolism by that constituent, the signifi-

cance of variations from the normal in clinical conditions, and in some instances diet lists for the corrections of abnormal findings.

Following the more usual technique, there is one given with the test tube colorimeters devised by Dr. Myers, simpler than the preceding, but not so accurate. Some of the tests can be performed by the physician himself in his own laboratory after some experience.

Following blood chemical methods some quantitative microscopic methods of urinalysis are given, and lastly a list of standard solutions and reagents with the method of preparing the same. The pages are large and easily read while following the instructions.

Altogether the book can be warmly recommended.—F. C. Hodges.

Skin and Venereal Diseases. Edited by Oliver S. Ormsby, M. D., Professor and Head of Departments of Skin and Venereal Diseases Rush Medical College, and James Herbert Mitchell, M. D., assistant Professor and Chief of the Syphilis Clinic Department of Skin and Venereal Diseases, Rush Medical College, series 1921. The Year Book Publishers Co., 504 S. Dearborn St., Chicago, Ill. Price of one volume $1.75, series of eight volumes $12.

Surgical Anatomy, by William Francis Campbell, M. D., Surgeon-in-Chief at Trinity Hospital, Brooklyn, N. Y.; sometime Professor of Anatomy and Professor of Surgery Island College Hospital. Third edition, revised. 681 pages with 325 original illustrations. W. B. Saunders Co., Philadelphia and London, 1921. Cloth $6.00 net.

It is a well recognized fact stated by the author that anatomical accuracy applied to surgical technique is a key note to success. It usually marks the difference between a well finished successful operation with satisfactory results and one of the haphazard bungling sort with its embarrassing and often deplorably unsatisfactory ending.

It has been said that a man may spend a life time in the study of anatomy and yet fall far short of a knowledge of it in its entirety. In his book Dr. Campbell has apparently succeeded in presenting such anatomical facts as have an important and practical bearing on the art and science of surgery. The work has been thoroughly revived and re-written with several illustrations and other matter inserted, thus enhancing the value of the text to both student and practitioner. The illustrations are finely executed the type, stock and binding all that could be reasonably desired. A good book to own.—C.R.E.

Management of the Sick Infant, by Langley Porter, B.S., M.D., M.R.C.E. (Eng.); L.R.C.P. (Lond.) Professor of Clinical Pediatrics University of California Medical School; Visiting Physician San Francisco Children's Hospital; Consulting Pediatrician Babies' Hospital, Oakland; Consulting Pediatrician Mary's Help Hospital San Francisco; and William E. Carter, M. D., Assistant in Pediatrics and Chief of Out Patient Department, University of California Medical School; attending Physician San Francisco Hospital, San Francisco. Illustrated. C. V. Mosby Co., St. Louis, 1922. Price $7.50.

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